

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

29 OCT 1982

Mr. Michael Campos  
Deputy Executive Director  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95801

Dear Mr. Campos:

We received your September 3, 1982 response to our July 13, 1982 letter in which we expressed concern about the protection of beneficial uses under the Delta Water Quality Control Plan (Delta Plan). Due to the complex nature of water quality management in the Delta, we feel both the State Water Resources Control Board (SWRCB) and the Environmental Protection Agency (EPA) could benefit from a discussion of our outstanding mutual concerns.

Therefore we would like to suggest a staff meeting to discuss the water quality standards as set forth in the Delta Plan. Specifically, we would like to address the EPA understandings concerning those water quality standards which were concurred in by the SWRCB in a letter dated November 21, 1980, and progress in resolving these understandings. We will be contacting your staff to set up a meeting within the next few weeks.

Thank you for your continued cooperation as we all work to protect beneficial uses of the Delta. If you have any questions, please contact Fred Leif of our California Branch at (415) 974-8289.

Sincerely yours,

Frank M. Covington  
Director, Water Management Division

CONCURRENCES							
SYMBOL	CA-Branch	PSB PCW	W-3-1	W-3	W-1	Mailed	
SURNAME	Zimler	Words	<i>[Signature]</i>	Koull	PAC	10/29/82	
DATE	10/27/82	27 Oct 82	10/27/82	11/27/82	10/28/82	J. Odum	



RA  
W-1  
RC  
4/21/82

# ENVIRONMENTAL DEFENSE FUND

April 20, 1982

Ms. Sonia Crow  
Regional Administrator, EPA  
215 Fremont Street  
San Francisco, CA 94105

Dear Ms. Crow:

Following up on our meeting last week, I am writing to call your attention to a matter which has a long history and as to which EPA, for many years, has played a very useful and constructive role. The issue is the setting of water quality standards for San Francisco Bay, the Suisun Marsh, and the Sacramento-San Joaquin Delta. The state of California is presently in violation of an agreement it reached with EPA to review and revise the above-mentioned standards in the event certain fishery survival objectives set forth in the standards were not achieved.

EDF asks simply that you inform the State Water Resources Control Board that it is in violation of federal law. This by itself would have salutary effects on the Board's resolve to do something on behalf of the fishery. In addition it may be desirable for you to press SWRCB for an immediate correction of this legal violation (by immediate, I mean perhaps within three months).

Implicated in this matter, incidentally, is a long-standing legal dispute within the federal government over EPA's authority to constrain the Bureau of Reclamation's Central Valley Project water exports in behalf of Delta water quality and environmental objectives. No doubt your staff will supply you with the key memorandum on the subject prepared by Robert Zener, EPA General Counsel, in November, 1975.

Protection of the Delta fishery involves a highly complex set of issues, legal, hydraulic, and ecological. If you are interested in a meeting to discuss this matter further, please don't hesitate to call on us at EDF.

Sincerely yours,

Thomas J. Graff  
General Counsel

TJGcam

2606 Dwight Way

Berkeley, California 94704

☎ 415-548-8906

OFFICES IN: NEW YORK, NY (NATIONAL HEADQUARTERS); WASHINGTON, DC; BERKELEY, CA; DENVER, CO

11 MAY 1982

Thomas J. Graff  
General Counsel  
Environmental Defense Fund  
2606 Dwight Way  
Berkeley, CA 94704

Dear Mr. Graff:

I enjoyed meeting with you at the Sierra Club meeting April 16, 1982 and want to thank you for your letter of April 20, 1982 following that meeting. I share your concern for the protection of beneficial uses in the San Francisco Bay, Suisun Marsh and the Sacramento-San Joaquin Delta.

We are aware that fishery survivals set forth in the water quality standards have not been achieved and that the State Water Resources Control Board (SWRCB) needs to review those standards. In our October 30, 1981, letter (copy enclosed) commenting on the SWRCB Prehearing Staff Report on the Triennial Review of the Delta Water Quality Control Plan, we stressed the insufficiency of the approved standards to protect the striped bass fishery in accordance with our 1980 interpretations. The State Board replied to Environmental Protection Agency's (EPA) letter in their summary of comments and responses dated April 19, 1982. Since the Environmental Defense Fund commented on the Triennial Review Staff Report as well, you no doubt are in receipt of the SWRCB summary. In addition, recent correspondence from the State Board to EPA and the United Anglers of California has more specifically defined the problem.

In summary, I am aware of the complex problems related to the adequate protection of Delta water quality and the obligation of Federal agencies, as well as State, local and private entities, to assist in the protection of

## CONCURRENCES

SYMBOL	W-3-2	W-3-2	OTSA PCW	41-3	W1			
SURNAME	ZIMMER	Wells	Woods	Wells	Wells			
DATE	5/6/82	5/6/82	6 May 82	5/6/82	5/6/82			

beneficial uses. Discussion is ongoing between EPA and SWRCB, in pursuit of Delta water quality standards/adequate to protect striped bass. I appreciate your concern and if any additional information is needed, please contact me or Pete Uribe of my staff, at (415) 974-8089.

Cordially yours,

Original Signed By  
Sonia F. Crow

SONIA F. CROW  
Regional Administrator

Enclosure

Ltr Graff  
reading file  
draft 5/4/82  
final 5/4/82  
refinal 5/6/82 (456C)  
Casserly:Rhonda Disc 9  
Rev. 5-10/Wilcox

JUN 21 1984

Mr. Michael A. Campos  
 Executive Director  
 State Water Resources  
 Control Board  
 P. O. Box 100  
 Sacramento, California 95801

Dear Mr. Campos:

At a meeting of our staffs on April 10, 1984, EPA discussed the need to complete a triennial review of the Delta Water Quality Standards this year. As you know, this is required under Section 303 of the Clean Water Act. While I understand that the State Board does not intend to formally reopen the hearings at this time, it is still important to review and confirm the standards, provide a status of the ongoing studies, and allow the public to provide input into the process at an early stage. A Board workshop might be the appropriate forum for such a review.

I realize that the recent California Superior Court decision on the Delta Standards has complicated the issue. However, the statutory requirements of the Clean Water Act must still be met. I request that you inform me of the Board's plans for such a review and provide a time schedule for your projected activities.

Sincerely yours,

Original Signed by:  
 Richard A. Coddington  
 Frank M. Covington  
 Director, Water Management Division

MCKEOWN/Lex. Disk, #14

CONCURRENCES							
SYMBOL	W-3-3	W-3-3	PSB PCW	W3	W-1	W3	J. D. Don
SURNAME	B. McKee	Metzger	Woods	Cresswell	RNO	MAILED	6/15/84
DATE	6/15/84	6/15/84	19 Jun 84	6/20/84	6/21/84	JUN 21 1984	



## STATE WATER RESOURCES CONTROL BOARD

PAUL R. BONDERSON BUILDING  
901 P STREET  
P.O. BOX 100  
SACRAMENTO, CALIFORNIA 95801  
916-445-1553



AUG 24 1984

Frank M. Covington  
Director, Water Management Division  
U.S. Environmental Protection Agency  
Region 9  
215 Fremont Street  
San Francisco, CA 94105

Dear Mr. Covington:

SECOND TRIENNIAL REVIEW OF THE DELTA WATER QUALITY STANDARDS

This is in response to your letter requesting information on our plans to conduct the second triennial review of the Delta Water Quality Standards contained in the 1978 Delta Plan. Current plans are that the State Board will hold a hearing in November 1984 to obtain public comments on a staff report regarding the triennial review of the Delta Plan and revisions to Resolution 80-18. Resolution 80-18 contains a 10-year schedule of State Board hearings and actions needed prior to the reopening of hearings to revise Delta standards. The hearing is expected to coincide with the State Board's regularly scheduled workshop on November 7 and 8, 1984.

Our work to date on the second triennial review indicates that the staff report will include the following:

- (1) Summary of new information obtained since the first (1981) triennial review which pertains to the possible need for modification of the current standards.
- (2) Recommendation that formal hearings be opened in 1986 to revise the standards as appropriate.
- (3) Draft Board Resolution updating the Board's schedule of actions needed to be completed by 1986 to facilitate the State Board's opening of formal hearings to revise the standards.

We expect to complete a draft of the staff report in late September. A notice will be issued at least 45 days prior to the hearing/workshop, and copies of the staff report will be made available to interested parties at least 30 days prior to the hearings/workshop. Board action is expected to culminate in the adoption of the proposed resolution at a later Board meeting.

AUG 24 1984

Mr. Frank M. Covington  
Page Two

If you have any questions concerning the above, please call me at (916) 445-1553 or call Mr. Gerald E. Johns, Bay-Delta Program Manager, at (916) 322-9870.

Sincerely,

A handwritten signature in dark ink, appearing to read "MACampos", with a stylized, flowing script.

Michael A. Campos  
Executive Director

29 MAR 1985

Ross Swenerton  
 Bay/Delta Unit  
 State Water Resources Control Board  
 P.O. Box 100  
 Sacramento, CA 95801

Dear Ross:

The purpose of this letter is to reiterate the necessity of the State Water Resources Control Board to formally transmit to EPA for approval the Second Triennial Review of the Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh (Delta Plan) as reconfirmed by your Board in January, 1985. The SWRCB's transmittal to EPA for approval for this action and its resolution is required under Section 303(c) of the Clean Water Act.

Enclosed for your information is a prototype letter for SWRCB transmittal of basin plan amendments to EPA for approval. This is to give you a sense of what we need in your transmittal letter requiring some background information, enclosures, etc.

If you have any questions please contact me at (415) 974-8326.

Sincerely yours,

Jovita E. Pajarillo  
 Water Quality Standards Coordinator  
 California Branch

Enclosure

project number: 225abc  
 pajarillo/draft: 03-21  
 pajarillo/re-draft: 03-27  
 pajarillo/final: 03-28  
 harold disk: #7

CONCURRENCES							
SYMBOL	W-3-3	W-3-3					
SURNAME	J. Pajarillo	B.M.					
DATE	3/29/85	3/29					



## STATE WATER RESOURCES CONTROL BOARD

PAUL R. BONDERSON BUILDING  
901 P STREET  
P.O. BOX 100  
SACRAMENTO, CALIFORNIA 95801



JUN 26 1985

Ms. Judith E. Ayres  
Regional Administrator  
U.S. Environmental Protection Agency  
Region 9  
215 Fremont Street  
San Francisco, CA 94105

Dear Ms. Ayres:

SECOND TRIENNIAL REVIEW OF THE WATER QUALITY CONTROL PLAN FOR THE  
SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH (DELTA PLAN)

In accordance with Section 303(c) of the Federal Clean Water Act and 40 CFR Section 131.20(c), results of the Board's second triennial review of the Delta Plan are herewith submitted for your review.

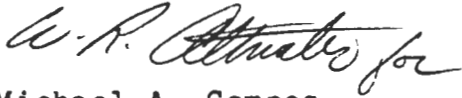
On January 17, 1985 the State Board concluded its second triennial review of the Delta Plan with the adoption of Resolution 85-4, reconfirming the Delta Plan Standards. This review began in October 1984 with the distribution to interested persons of a staff report summarizing available information and providing staff recommendations pertinent to the Plan. A public hearing and a workshop were held on November 7, 1984 and January 3, 1985, respectively, to receive public comments on this triennial review of the Delta Plan.

Enclosed for your information is a copy of Board Resolution No. 85-4, "Reconfirming the Water Quality Standards Contained in the 1978 Delta Plan and Revising the Board's Schedule of Hearings and Actions to Resolve Outstanding Issues Relative to the Delta Plan." Included as Attachments A and B to this Resolution are a summary of comments and recommendations made by the various participants at the public hearing and workshop and staff's responses to the recommendations that were made.

JUN 26 1985

We request that the Environmental Protection Agency review and approve the enclosed material pursuant to 40 CFR Section 131.20(c). Please call Leo Winternitz at (916) 324-5751 if you have any questions concerning this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "M. A. Campos for".

Michael A. Campos  
Executive Director

Enclosures

- STATE WATER RESOURCES CONTROL BOARD -

RESOLUTION NO. 85-4

RECONFIRMING THE WATER QUALITY STANDARDS CONTAINED IN THE 1978 DELTA PLAN, AND REVISING THE BOARD'S SCHEDULE OF HEARINGS AND ACTIONS TO RESOLVE OUTSTANDING ISSUES RELATIVE TO THE DELTA PLAN.

WHEREAS:

1. The State Board, in August 1978, adopted a water quality control plan for the Sacramento-San Joaquin Delta and Suisun Marsh (Delta Plan) to protect beneficial uses of water in the Sacramento-San Joaquin Delta and Suisun Marsh and to provide for necessary studies intended to develop reliable information regarding the outflow needs of San Francisco Bay.
2. Pursuant to Section 303(c) of the Clean Water Act, the State Board must complete a triennial review of the water quality standards in the Delta Plan.
3. The State Board intends to open a new hearing in 1986 to consider revisions to the water quality standards contained in the Delta Plan and new standards for San Francisco Bay.
4. In April 1980, the State Board adopted Resolution No. 80-18 specifying a schedule of hearings and actions to resolve outstanding issues relative to the Delta Plan.
5. On November 7, 1984, the State Board held a public hearing to review and consider the adequacy of the water quality standards in the Delta Plan.
6. At the November 7, 1984 hearing, the State Board also considered the progress and status of ongoing studies to resolve outstanding issues relative to the Delta Plan.
7. The scope of the Delta Plan is limited to flow and salinity-related issues, while non-salinity-related pollutant and toxic issues are addressed by the Regional Boards in the Basin Plans.
8. It is the State Board's policy to review water right applications or petitions to modify water right permits affecting the Delta on a case-by-case basis to ensure that no adverse effects on prior rights and beneficial uses occur.
9. It is the State Board's policy to maintain jurisdiction to modify existing appropriative water rights permits to meet water quality objectives, which have been or hereafter may be established pursuant to the Water Code.

10. The standards contained in the Delta Plan should not be amended at this time, pending completion of studies and preparation of exhibits that will be submitted to the State Board during its hearing planned to commence in 1986, and pending resolution of issues currently before the courts which will affect the Delta.

THEREFORE BE IT RESOLVED:

1. That the water quality standards and Program of Implementation contained in the Delta Plan are reconfirmed and will remain in effect until the Plan is amended as a result of new hearings scheduled to begin in 1986.
2. That the State Board's schedule of hearings and actions to resolve outstanding issues relative to the Delta Plan, adopted in Resolution 80-18, is hereby superceded and revised in accordance with the attached table.

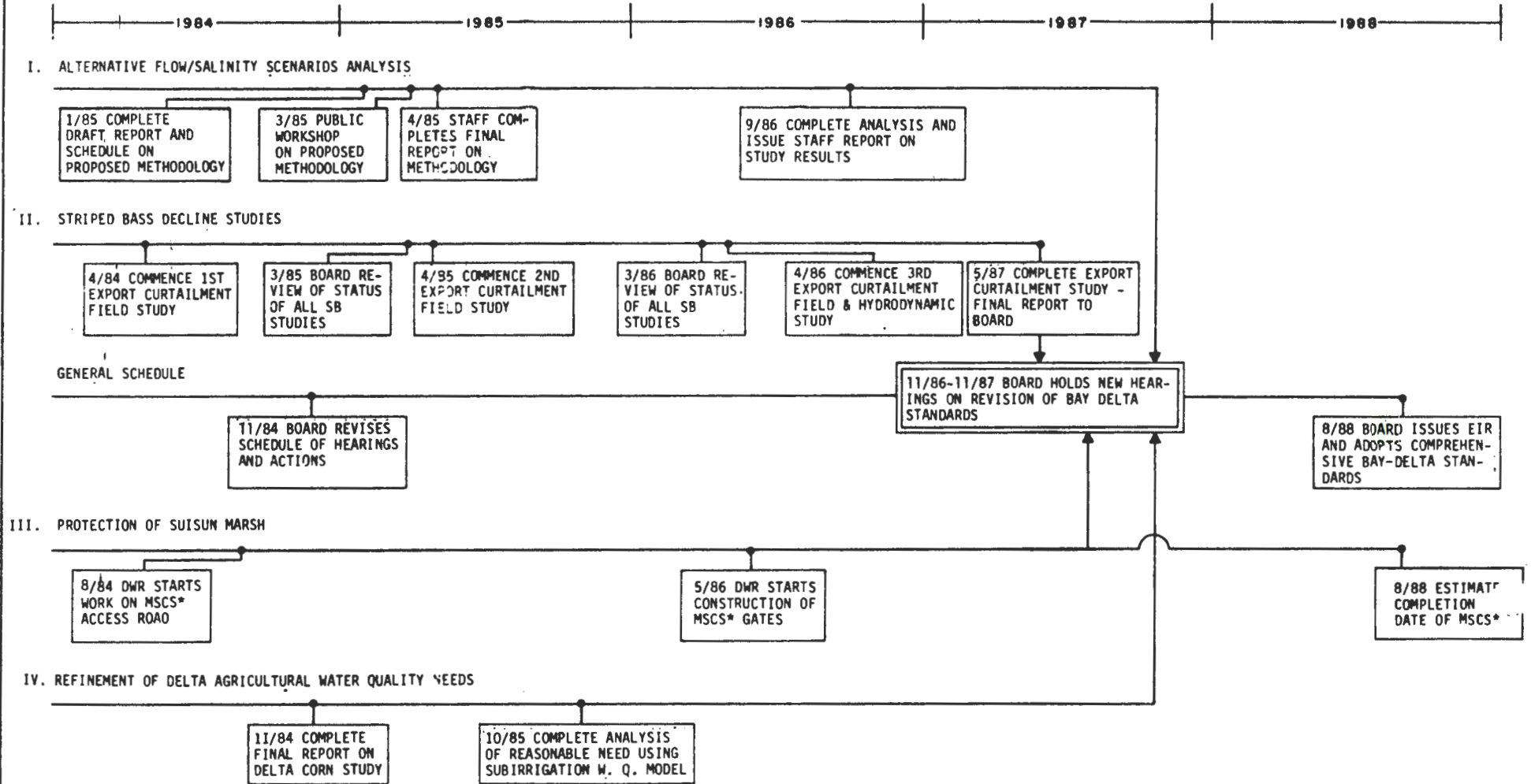
CERTIFICATION

The undersigned, Executive Director of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on January 17, 1985.

  
Michael A. Campos  
Executive Director

STATE WATER RESOURCES CONTROL BOARD  
SCHEDULE OF KEY HEARINGS AND ACTIONS  
BAY-DELTA PROGRAM

PAGE 1 of 2  
1/85



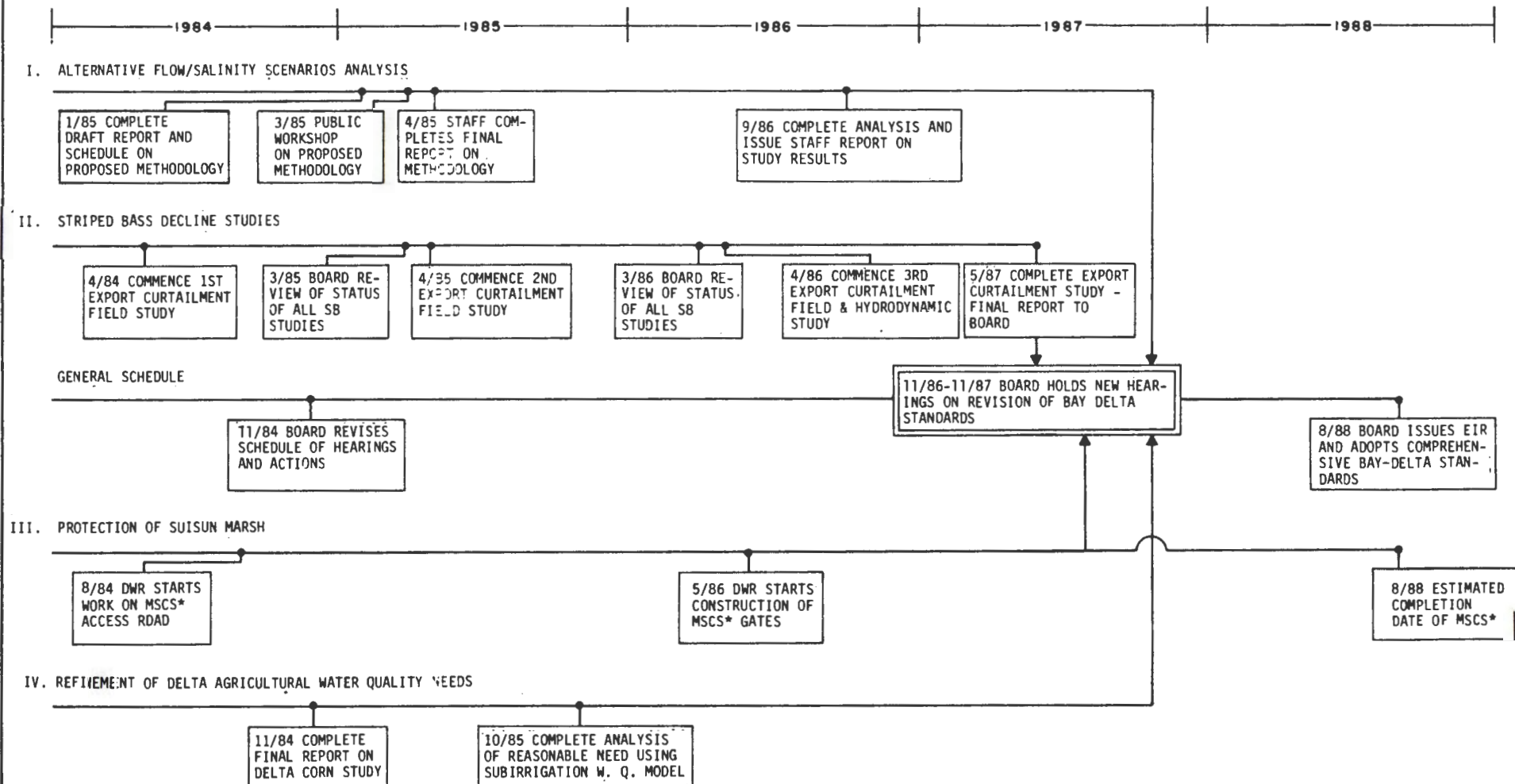
\*MONTEZUMA SLOUGH CONTROL STRUCTURE

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Sides



STATE WATER RESOURCES CONTROL BOARD  
SCHEDULE OF KEY HEARINGS AND ACTIONS  
BAY-DELTA PROGRAM

PAGE 1 of 2  
1/85



\*MONTEZUMA SLOUGH CONTROL STRUCTURE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

215 Fremont Street  
San Francisco, CA 94104

18 SEP 1985

Raymond Walsh  
Executive Director  
State Water Resources  
Control Board  
P. O. Box 100  
Sacramento CA 95801

Dear Mr. Walsh:

On June 26, 1985, the State Water Resources Control Board (SWRCB) submitted to the Environmental Protection Agency (EPA) Resolution Number 85-4, completing the Second Triennial Review of the Water Quality Control Plan for the Sacramento - San Joaquin Delta and Suisun Marsh (Delta Plan).

The SWRCB submittal requested EPA's review and approval of the Delta Plan Triennial Review. The Federal Water Quality Standards Regulations (40 CFR 131 - adopted 11/8/83) outline the minimum requirements that a state submittal must meet. One of the requirements is that a Water Quality Control Plan must contain water quality criteria sufficient to protect the designated beneficial uses. In addition, EPA's approval of the Delta Plan in 1980 contained State - EPA agreements concerning verification of whether aquatic life was being protected in the Bay-Delta estuary.

EPA has reviewed the SWRCB prehearing staff report, the summary of public comments and recommendations, the SWRCB response to comments, and the 1980 conditional approval of the Delta Plan. We have a number of issues regarding the State submittal which need to be discussed before we can take action on this matter.

I would recommend that a meeting be held between the staff of the SWRCB Bay-Delta Unit and EPA to discuss our concerns. I look forward to hearing from you at your earliest convenience.

Sincerely,

A handwritten signature in cursive script, reading "David B. Jones", is written over a horizontal line.

David B. Jones, Chief  
California Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street  
San Francisco, Ca. 94105

28 OCT 1985

Mr. Jerry Johns  
Assistant Division Chief  
Water Rights Division  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95801

Dear Jerry:

I would like to follow-up on our October 15, 1985 meeting regarding the Second Triennial Review of the Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh (Delta Plan).

Enclosed is a preliminary draft of the EPA response letter to your June 26, 1985 submittal. I would appreciate your comments and reactions to the letter.

Further discussions are needed on the scope and schedule for the upcoming hearings. Please give me a call when you have completed your review.

Sincerely,

David B. Jones, Chief  
California Branch  
Water Management Division

Enclosure

cc: Dave Beringer  
Ross Swenerton

## STATE WATER RESOURCES CONTROL BOARD

PAUL R. BONDERSOHN BUILDING  
901 P STREET  
P.O. BOX 100  
SACRAMENTO, CALIFORNIA 95801  
(916) 445-1553



<del>RA/DRA</del>
Referred To <u>W-1</u> ←
CC: <u>ORA</u>
File: _____

JUN 23 1986

Judith E. Ayres  
Regional Administrator  
U.S. Environmental Protection Agency  
Region 9  
215 Fremont Street  
San Francisco, CA 94105

Dear Ms. Ayres:

SECOND TRIENNIAL REVIEW OF THE 1978 WATER QUALITY CONTROL PLAN  
FOR THE SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH  
(DELTA PLAN)

In a letter dated September 16, 1985, Mr. David Jones of your staff indicated that there were a number of issues regarding the State Delta Plan submittal which needed to be discussed before EPA could take action on the SWRCB's reconfirmation of the water quality standards in this plan.

Subsequent to that time your staff has asked the Board for additional information on the striped bass survival and spawning standards. In particular, they have requested information to support the Board's findings that the water quality criteria protect the fish and wildlife beneficial uses; are based on sound scientific rationale; and contain sufficient parameters, such as toxics, to protect the designated beneficial uses. In addition, they have asked for clarification on the wording of the Board's triennial review approval resolution. EPA has questioned the consistency of this resolution with the findings in the prehearing staff report.

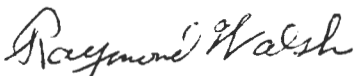
During the same time frame as these discussions, the Board has appointed an ad hoc toxic committee to review existing literature and studies dealing with toxic pollutants in the San Francisco Bay-Delta estuary. The main objective of this review is to differentiate flow and salinity impacts on the fishery from pollutant related impacts. Information from this study and others will be brought to the Board in the upcoming Bay-Delta hearings. In addition, the Board has scheduled five prehearing conferences in order to provide the public with the opportunity to assist the Board in refining the issues that need to be resolved in order to protect the beneficial uses of the estuary.

The decline in the Striped Bass Index clearly indicates that current standards are not adequate to protect the fishery resource. However, the Delta Plan was narrowly focused to deal only with flow and salinity impacts. Some scientists believe that pollutants (perhaps from nonpoint sources) may be playing a significant role in the decline of striped bass. Therefore, it has become increasingly evident that further coordination between the State Board's efforts to deal with water quantity issues in the estuary must be closely coordinated with the Basin Plan updates of the Regional Boards. We have already met with the Regional Boards and will continue to do so until a mutually agreeable process is developed to involve them during that part of the hearing process when evidence on pollutant impacts will be heard.

The prehearing conferences to help the Board establish the scope and issues for the Bay-Delta hearing have begun and will be concluded in June. The Board proposes adopting a workplan setting the scope, process and schedule for this hearing. This workplan should be adopted by October 1986. Any necessary modifications to the State Board triennial review resolution will be made at that time. A coordinated effort by the State and Regional Board should assure that water quality standards will be established to fully protect the designated beneficial uses of the Bay-Delta estuary.

We have kept EPA fully informed of each phase of the planning of the hearings and we will continue to keep EPA fully informed of our actions as they relate to standards concerning the Bay-Delta estuary.

Sincerely,



Raymond Walsh  
Interim Executive Director

cc: San Francisco Regional Water  
Quality Control Board

Central Valley Regional Water  
Quality Control Board



29 JUN 1987

Mr. W. Don Maughan  
Chairman  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95801

Dear Mr. Maughan:

The U.S. Environmental Protection Agency (EPA) has reviewed State Board Resolutions 85-4 and 87-7, and other relevant materials concerning the Second Triennial Review of the Water Quality Control Plan for the Sacramento/San Joaquin Delta and Suisun Marsh (Delta Plan).

Delta water quality is presently governed by four sets of standards: the Delta Plan, the Water Quality Control Plans for the Central Valley and the San Francisco Bay Basins (Basin Plans), and the Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Bays and Estuaries Policy). This action concerns only the water quality standards contained in the Delta Plan.

The State Board completed the Delta Plan Second Triennial Review in January of 1985 when it adopted Resolution 85-4, and submitted the results of the review to EPA for approval on June 26, 1985. On September 18, 1985 EPA requested additional information from the Board to support certain findings, and gave the Board the opportunity to either supply this information or to modify the findings made in Resolution 85-4. Since neither the requested information nor these modifications were forthcoming by the time the Board adopted Resolution 87-7 on February 5, 1987 (adopting the workplan for the upcoming Bay-Delta hearings), EPA is taking the following action.

EPA approves the water quality standards contained in the Delta Plan with the exception of the striped bass survival standards and the relaxation provision of the striped bass spawning standard. EPA can not approve these two standards as we believe the standards do not adequately protect the fishery resource. EPA does, however, recognize

CONCURRENCES							
SYMBOL	W-3	W-3	W-1	ORC	W-1		
SURNAME	Kuhlman	Gonz	PAC	Nutt	7/8		
DATE	6/24/87	6/24/87	6/24/87	6/29/87	6/29/87		

that the necessary changes to these standards are difficult to specify. We also note that the State Board has embarked upon a full-scale review of the Delta Plan standards through a public hearing process. It is mandatory that this process result in standards which provide assured protection for the resource. At the termination of the hearing process, and the submission of the State's standards to EPA, EPA will at that time, take an approve or disapprove action.

In regard to the striped bass survival standards, it is important to note that one of the goals of the Delta Plan was to maintain the fishery in the estuary at levels which would have existed in the absence of the State Water Project and the Federal Central Valley Project. The striped bass was chosen by the State in 1978 as the key indicator species to be used in measuring the health of the fishery resource in the estuary. The striped bass index (SBI), was based upon a relationship between flow and young striped bass survival. This relationship was then translated into enforceable water quality standards for flow through the Delta. In order to restore and maintain the fishery at "without project" levels, these standards were established to attain a long term average SBI of 79. This specific target SBI quantitatively defines the success of the Delta flow standards in protecting the fishery. In adopting the Delta Plan, the Board determined that water quality objectives for flow and salinity alone were sufficient to protect the beneficial uses.

However, the striped bass index as measured between 1978 and 1984 was significantly below the number predicted. The validity of the correlation between flow and striped bass survival has become obscured, perhaps because either: 1) the correlation is no longer as strong as it once appeared, and hence the standard is no longer based upon sound scientific rationale; or 2) some other constituent(s) other than flow and salinity may be severely impacting the striped bass fishery. Regardless of which of these may prove to be the case, the continuing decline of the striped bass index clearly indicates the inadequacy of the existing striped bass survival standards, and the need for substantial revisions in the next Delta Water Quality Control Plan. EPA, therefore, cannot approve these standards.

As mentioned, although the cause behind the continuing decline of the striped bass index may not be clear, it is reasonable to presume that there still exists a flow-survival relationship, and that increased freshwater flows may be necessary in order to better protect the survival of young striped bass. It is EPA's position that the State Board should not allow any further incremental diversions of freshwater flows above those that are presently permitted, until the upcoming Bay-Delta water quality standards review and revision process is completed. Additionally, should the State, as a result of the hearings, decide to allow increased diversions out of the estuary, it may do so only after the necessary antidegradation requirements have been satisfied.

As for the relaxation provision of the striped bass spawning standards, we do not at this time take issue with the scientific validity of the spawning standard itself; however, the evidence for allowing a relaxation of the standard is questionable. Page VI-3 of the Delta Plan states "it may be possible to exceed these values for brief periods with little adverse effect on spawning." Since the drought years of 1976-77 when there was a long period of exceedances of adequate salinity conditions for spawning, the striped bass abundance has not recovered to levels predicted, based upon Delta outflow. While the Delta Plan was not in place at that time, EPA believes that these data have shown that the impacts of the relaxation provision were underestimated. The Board's administrative record (Delta Plan and EIR) supporting the relaxation does not provide any scientific evidence that this relaxation provision will not adversely affect spawning of striped bass. We believe that this evidence is mandatory before EPA can approve such a provision. Therefore, at this time the relaxation provision of the striped bass spawning standard is not approvable.

As we find ourselves in the midst of what will be classified as a "critical" year by the State Department of Water Resources, the issue of the relaxation provision is especially relevant. It is EPA's position that the State Board should remove the relaxation provision until such time as its appropriateness can be demonstrated. This would not preclude the adoption of a similar provision in the Water Quality Control Plan that will result from the Bay-Delta hearings that are scheduled to begin in July.

Regarding the upcoming hearings, additional areas which have been addressed in our earlier letters and which must be addressed in the upcoming hearings include the water quality needs of the Southern Delta and San Francisco Bay. Also, the recently enacted Water Quality Act of 1987 contains some new requirements which will have a direct bearing on the upcoming proceedings. Enclosures 1 and 2 contain a list of both outstanding and new issues that must be considered in the 1987-88 Delta hearings. I would recommend an early meeting between our respective staffs to discuss these issues.

EPA realizes the difficulty of establishing standards for a complex system such as the Bay-Delta estuary. Nonetheless, we have an unswerving commitment to maintain the water quality of the estuary. For this reason we have in the past urged the development of standards to provide interim protection of beneficial uses. This action serves as a recognition that, despite these historic efforts by the State, the San Francisco Bay-Delta is not being adequately protected.

We look forward to working with the State Board towards developing water quality standards for the estuary which will be truly protective of the resource, the importance of which cannot be overstated.

Sincerely,  
ORIGINAL SIGNED BY:  
JUDITH E. AYRES

JUDITH E. AYRES  
Regional Administrator

Enclosures

cc: Executive Officer, Central Valley Regional Water  
Quality Control Board (w/o enclosures)  
Executive Officer, San Francisco Bay Regional Water  
Quality Control Board (w/o enclosures)

RA - Reading File  
W-1 - Reading File  
W-3 - Reading File  
W-3 - Official File

W-3 - J. Johnstone, Larry, 06/24/87



ENCLOSURE 1  
~~ENCLOSURE 3~~

Additional Issues of Concern

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A. SOUTHERN DELTA

In the Delta Water Quality Control Plan, the State Board recognized that current water supply conditions were not sufficient to reasonably protect the agricultural use of water in the Southern Delta. The major effect on water quality and quantity in the Southern Delta originates in the San Joaquin River watershed and is not a result of the Sacramento River System projects which are the subject of the corollary water rights decision.

Currently, there is a standard of 500 mg/l TDS at Vernalis on the San Joaquin River which provides some protection to beneficial uses at that point. However, this standard is not protecting other channels which are affected by impaired water movement (for example, Tom Paine Slough and Old River near Tracy Road Bridge). As water is diverted and agricultural drainage discharged into these channels, salinities in these water bodies can reach values as high as twice those of the San Joaquin River. The water circulation in the Southern Delta is highly dependent on the water level in the channels.

On July 9, 1982, the Southern Delta Water Agency filed a lawsuit in the U.S. District Court against the USBR and DWR. The case went before the Ninth Circuit Court of Appeals on an interim appeal regarding jurisdictional questions. The case was remanded back to the District Court, and until recently was on the Court's calendar for April. However, a settlement now appears likely, and the case has been removed from the calendar.



The State Board has the jurisdiction and necessary authority to resolve this issue. Because of the ongoing and drawn-out litigation, the State Board should develop water quality standards for the Southern Delta based on its authority under State and Federal law. The State Board's decision should not be rendered meaningless by the outcome of the litigation, with the completion of a clear administrative record on its action.

The State Board's record clearly shows that the existing water quality standards are not fully protecting the beneficial uses in the Southern Delta. While there are standards established at Vernalis, additional standards for other stream segments are required to provide full protection to the Southern Delta. This issue needs to be resolved in order to have a Water Quality Control Plan that fully protects the beneficial uses.

B. SAN FRANCISCO BAY

Currently, the Delta Plan has no salinity standards established to protect the beneficial uses of San Francisco Bay. The Delta Plan stated that:

"Unregulated outflows, particularly short bursts of moderate flows, have been found to have a substantial effect on hydraulic and salinity conditions in the Bay."

While the administrative record that was developed did not contain information which could quantify the beneficial effects of these flows, it was stated that:

"The ecological benefits of unregulated outflows and the salinity gradients established by them have been suggested to include the following: (1) alteration of the distribution and migrations of free-swimming organisms, (2) creation of counter currents moving upstream along the bottom of the Bay which are hypothesized to be necessary for the brackish water migration of certain crabs and shrimps, and (3) transportation of young anadromous fish and maintenance of adequate food supplies."

In addition, Delta outflow has been shown to be important for providing turn-over in the South Bay. However, during the adoption of the Delta Plan in 1978, the SWRCB did not feel there

was adequate information to set specific outflow standards to protect the beneficial uses of the Bay. In order to obtain this information the San Francisco Bay-Delta Outflow Study was initiated in 1979. Additionally, hydrodynamic studies have been undertaken to model the effects of different Delta outflow conditions. When the Delta hearings are reopened, it is expected that only a preliminary understanding of the flow needs of the Bay will be available. At that time the State Board should adopt interim salinity standards based on the best available information. While it must be realized that these standards will need to be revised when further research is completed, further delays in establishing standards to protect the beneficial uses of the Bay will not be accepted.

C. WATER QUALITY ACT OF 1987

In enacting the Water Quality Act of 1987, Congress included two new sections, which EPA believes to have a very direct bearing on the upcoming Delta proceedings.

Section 308(d) of the Act amends Section 303 of the Clean Water Act and requires the State to adopt numerical standards for all toxic pollutants for which EPA has published criteria, for waters in which those pollutants can reasonably be expected to interfere with the attainment of designated uses. To control pollutants for which numerical criteria are not available, States are required to adopt standards based on biological monitoring or assessment methods to assure that no toxics are present in toxic amounts in the State's waters.

Section 308 also amends Clean Water Act §304 and requires the State to develop "individual control strategies for toxic pollutants" within two years from the Act's date of enactment (January 1987).

Additionally, the Water Quality Act of 1987 contains a section 316, which creates a new Section 319 and calls for the State to develop a "nonpoint source management program" within eighteen months.

We recognize that the State Board has decided to expand the scope of the upcoming hearings to include testimony on non-salinity related pollutants, and to develop a Pollutant Policy Document, for use by the Regional Boards in amending

their Basin Plans regarding these non-salinity pollutants within the estuary. EPA believes that inclusion of the outputs required under Sections 303, 304, and 319 into the Pollutant Policy Document would make it a more useful document than without.

Although it may not be possible for the State Board to complete all three products for all of the waters of the State within the timeframe for the development of the Pollutant Policy Document, the work to be done within the estuary and its tributaries should be prioritized so that this information is available for the Delta hearings. This information can later be incorporated into the final statewide products.

EPA staff will work with staff from the State Board to assist them in developing the information necessary for these products.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street  
San Francisco, Ca. 94105

Carla M. Bard, Chairwoman  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95801

28 AUG 1980

Dear Ms. Bard:

We have reviewed California's water quality standards for the Sacramento-San Joaquin Delta and Suisun Marsh as contained in the Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh (Delta Plan) adopted by the State Water Resources Control Board on August 16, 1978, by means of Resolution No. 78-43. Also, we have reviewed various supporting materials including the January 25, 1979 transmittal of the Delta Plan and the February 7, 1980 transmittal of additional information to supplement the Board's 1979 transmittal.

I am pleased to inform you that I am approving California's Delta Plan as standards for these waters pursuant to Section 303(c) of the Clean Water Act. This action is based upon my determination that these water quality standards are consistent with the protection of the public health and welfare and the purposes of the Clean Water Act.

I commend the State Water Resources Control Board for its cooperation in working with the Environmental Protection Agency in developing and adopting these revised standards. With this approval, the current Federally approved water quality standards for the San Francisco Bay Basin (2) and the Sacramento-San Joaquin Delta Basin (5B) are, in addition to the Delta Plan, the following State Water Resources Control Board documents:

Sacramento-San Joaquin Delta Basin (5B)

"Water Quality Control Plan Report, Sacramento River Basin (5A), Sacramento-San Joaquin Delta Basin (5B), San Joaquin Basin (5C), Volume I", August 21, 1975, as amended, Chapters 2 and 4 ("Basin 5B Plan")

"Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California", May 18, 1972, as amended

State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California", October 1968

"Water Quality Control Policy for the Enclosed Bays and Estuaries of California," May 1974

San Francisco Bay Basin (2)

These State Water Resources Control Board documents also apply in the San Francisco Bay Basin with the exception that the "Basin 5B Plan" should be replaced by the following documents:

"Water Quality Control Plan, San Francisco Bay Basin (2), Part 1", April 17, 1975, as amended, Chapters 2 and 4 ("Basin 2 Plan")

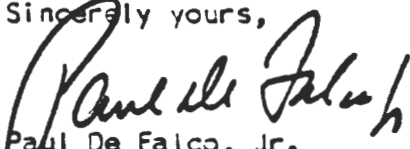
"Water Quality Control Plan for Ocean Waters of California", January 19, 1978, as amended (Ocean Plan)

The Delta Plan supersedes Figure 4-1 and the Delta salinity standards of Table 4-2, both contained in the Basin 5B Plan. Also, the Delta Plan supersedes the Chipps Island and Suisun Marsh salinity standards of the Basin 2 Plan.

In approving the Delta Plan water quality standards, it is my assumption that the interpretations stated in Enclosure 1 and the schedules for additional standards development set forth in Enclosure 2 will be followed by the Board in the development and refinement of Delta standards. To assure that no misunderstanding may occur, please confirm to me within a month of the date of this letter that these interpretations and schedules conform with the State's views. These interpretations and schedules are not intended to alter any of the conditions, interpretations or schedules of water quality standards development that are outstanding from the letters of approval for any of the previously approved standards in other policies and plans that apply to these waters.

In these continuing efforts toward developing water quality standards, it will be our pleasure to continue to work together with the State to protect the quality of California's waters.

Sincerely yours,

  
Paul De Falco, Jr.  
Regional Administrator

Enclosures



Enclosure 1

ENVIRONMENTAL PROTECTION AGENCY  
July 1980

EPA INTERPRETATIONS OF WATER QUALITY STANDARDS  
SACRAMENTO-SAN JOAQUIN DELTA and SUISUN MARSH  
(DELTA PLAN)

1. If two numerical values in the water quality standards conflict, the more stringent value will prevail.
2. If it is shown that there is a measurable adverse effect on striped bass spawning\*, then a complete review of the Striped Bass Spawning Standard Relaxation Provision (at the Antioch Waterworks Intake when project deficiencies are imposed) (Table VI-1, page VI-31) shall commence immediately. Similarly, if any change in Suisun Marsh Chipps Island standards is proposed, as part of that standards amendment process, a review and revision of the Relaxation Provision shall commence.
3. If there is a measurable decrease\*\* in the Striped Bass Index (SBI) below that predicted, the SWRCB shall commence immediate actions to review and revise the Delta Plan standards such that "without project" levels of protection are attained. It is our understanding that an average SBI of 79 represents "without project" protection.

---

\* "A measurable adverse effect on striped bass spawning" means the following: the Striped Bass Index (SBI) for the individual year is decreased by more than 3 standard deviations from that which would otherwise be predicted using the relationships shown on Figures III-27 and III-28 of the Final EIR for Delta Plan adopted August, 1978.

\*\* Measurable decrease means either:

- (1) three consecutive years where the SBI is decreased by more than one standard deviation below that which would otherwise be predicted for each year using the relationships shown in Figures III-27 and III-28 of the Final EIR of the Delta Plan adopted August, 1978; or
- (2) six consecutive years where the SBI is below that predicted for each year, using the above relationships.

ENVIRONMENTAL PROTECTION AGENCY

July 1980

ADDITIONAL WATER QUALITY STANDARDS DEVELOPMENT  
SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH  
(DELTA PLAN)

As a part of the water quality standards revision process pursuant to section 35.1550, the State shall develop additional water quality standards specified below and shall hold public hearings and shall adopt revisions to water quality standards as appropriate.

1. Through State Water Resources Control Board Resolution No. 80-18, "Adoption of a Schedule of Hearings and Actions to Resolve Outstanding Issues Related to the Bay-Delta Watershed," adopted by the Board on April 17, 1980, the Board has committed itself to review water quality issues, to develop additional water quality standards, and to adopt the developed standards. The following list of standards needs is included in work covered by Resolution No. 80-18 and shall be completed as scheduled in the Resolution:
  - a. In its review of standards, the Board shall evaluate information developed on:
    - 1) water treatment costs for industrial processes and municipal uses;
    - 2) reclamation potential of wastewater;
    - 3) potential for crop decrement to salt sensitive tree crops and sprinkler irrigated ornamental shrubs for municipal and industrial users from the western delta; and
    - 4) shall develop additional standards as appropriate to protect those uses.
  - b. The State has studies underway to determine the water quality needed to protect agriculture during the portion of the year between August 16 and March 30. These studies are scheduled to be completed by 1982. Additional standards to protect this beneficial use shall be developed.
  - c. The State shall evaluate the ongoing negotiations between the State Department of Water Resources, Water and Power Resources Service (formerly USBR) and the South Delta Water

Agency to resolve differences in the determination of effective and acceptable means to protect southern delta agricultural use and develop additional standards to protect this beneficial use, as appropriate.

- d. The State shall ensure that necessary studies are performed to provide a basis for additional standards which will supplement the protection derived from striped bass survival standards and provide more appropriate protection for other fish species and aquatic life.
  - e. The State shall ensure that necessary studies are performed to provide a basis for additional standards which will supplement the protection derived from Suisun Marsh standards and provide more direct protection for aquatic life in marsh channels and open waters.
  - f. The State has studies underway to determine the water quality needed to protect beneficial uses of San Francisco Bay. These studies are scheduled to be used in a State Board standards review in 1986. The State shall develop standards based on any early conclusions of these studies as soon as possible. These will include standards that maintain the natural periodic overturn in the South Bay to protect the designated beneficial uses of those waters. In any case extensive review of Bay salinity standards shall commence no later than 1986.
  - g. The State has studies underway to determine the effects of algal productivity in the estuary (including biostimulation) on water quality. These studies shall be used to develop standards to control excessive biostimulation in the estuary as soon as possible. Continued studies and modeling efforts to refine these standards shall be used to update these standards.
2. As part of the triennial review to be submitted to the State Board by August 1981, the State shall evaluate the following to determine what new or additional standards and/or plans of implementation shall be adopted to protect designated beneficial uses.
- a) the water quality standards in Cache Slough at the City of Vallejo Intake to restore and/or correct any deficiencies in protection of designated beneficial uses that may exist there.
  - b) water quality standards to protect drinking water supplies from precursors of trihalomethanes. (e.g., salinity and organic materials).

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

26 JUN 1987

MEMORANDUM

SUBJECT: Communication Strategy Announcing Action on  
California Water Quality Standards for the Delta

FROM: Harry Seraydarian  
Director  
Water Management Division

TO: Deanna M. Wieman  
Director  
Office of External Affairs

Attached please find the draft communication strategy and press release for the announcement of EPA's action regarding the striped bass standards contained in the State of California's Delta Plan. It is expected that the announcement will occur on approximately June 29.

If your staff has any questions, please contact Catherine Kuhlman at 4-8285.

## Attachment

cc: W-1 - Reading File  
W-3 - Reading File  
W-3 - Official File

W-3 - J. Johnstone, Larry, 06/24/87

## CONCURRENCES

SYMBOL	W-3	W-3	W-1	W-1			
SURNAME	Kuhlman	Johnstone	W-1	W-1			
DATE	6/24/87	6/24/87	6/26/87	6/26/87			

COMMUNICATION STRATEGY:

ANNOUNCEMENT REGARDING ACTION ON CALIFORNIA  
DELTA PLAN WATER QUALITY STANDARDS

EXPECTED

DATE OF

ACTION: 29 June 1987

ACTION:

Letter from the Regional Administrator to Don Maughan, Chairman of the State Water Resources Control Board, notifying him that EPA does not approve the water quality standards developed for the protection of striped bass in the Delta of the Sacramento/San Joaquin Rivers.

BRIEF

BACKGROUND:

In 1978 the State of California adopted the Water Quality Control Plan for the Sacramento/San Joaquin Delta and Suisun Marsh (Delta Plan). The Delta Plan contains standards developed for the protection of striped bass, an economically important species utilized in the Plan as a surrogate for other fisheries as well. In 1985 the State completed its Second Triennial Review of the Delta Plan Standards, reconfirming the existing standards as adequate. The evidence, however, indicates otherwise - that the striped bass standards are not adequate.

TYPE OF

PUBLIC

INTEREST

EXPECTED: High Visibility

PROJECT

OFFICER: Vacant

SECTION CHIEF: Catherine Kuhlman (4-8285)

PRESS BACKUP: 1. Dick Coddington  
2. Harry Seraydarian  
3. Catherine Kuhlman

TIMETABLE:

The preparation and release of information on this action is to be accomplished according to the following timetable:

## Region 9 Communication Strategy for: Announcement of California Delta Plan Water Quality Stds. Action

AUDIENCE	HOW NOTIFIED	TIME FRAME	RESPONSIBLE STAFFER	MATERIALS NEEDED	NOTES
---	---	-2	C. Kuhlman	Press Release ("A")	
---	---	-2	C. Kuhlman	Action Letter ("B")	
<hr/>					
RESPONSIBLE PARTY					
State Water Resources Control Board	DHL Mail	-2	C. Kuhlman	Action Letter	
Chairman Don Maughan	Phone	0	J. Ayres	A & B	To Confirm Receipt
Governor's Office?	Phone	-2	J. Ayres	A & B	
MEDIA					
Regional Media/Newswires	PR Newswire (Noon)	0	T. Wilson	A	At confirmation of
SWRCB P.A.O.	Phone	0	T. Wilson	A & B	
Press Briefing (invited)	Phone (10:00 am)	0	A. Zemsky		
FEDERAL ELECTED OFFICIALS					
Representative Miller	Mail	0	C. Roberts	A & B	
Senator Wilson	"	0	"	"	
Senator Cranston	"	0	"	"	
Reps. Boxer, Fazio, Mineta, Pelosi	"	0	"	"	

- more -



Region 9 Communication Strategy for: Announcement of California Delta Plan Water Quality Stds. Action

AUDIENCE	HOW NOTIFIED	TIME FRAME	RESPONSIBLE STAFFER	MATERIALS NEEDED	NOTES
STATE OF CALIFORNIA ELECTED Assemblyman Bates Assemblyman Costa Senator Ayala Senator Marks	Mail	0	C. Roberts	A & B	
FEDERAL AGENCIES Bureau of Reclamation	Mail	0	C. Kuhlman	A & B	
STATE OF CALIFORNIA AGENCIES Dept. of Water Resources	Mail	0	C. Kuhlman	A & B	
PUBLIC INTEREST GROUPS EDF (Graff), NRDC, Bay Institute, Sierra Club (Fisher), CBE, Tiburon Center for Env. Studies, CWPC (McPeak), Pacific Coast Fed. of Fish Ass., Coastal Fisheries Foundation, Coastal Fisheries Foundation, League of Women Voters. Golden Gate Audubon, Sierra Club (Fisher)	Mail            Phone	0/+1	C. Frieber	A & B	
		0/+1	Harry Seraydarian		

FOR INTERNAL USE ONLY

Delta Standards Action

Questions and Answers

12 June 1987

1. Has EPA disapproved the striped bass standards under Section 303 of the Clean Water Act and 40 CFR 131?
  - No. EPA is not, at this point, prepared to disapprove the standards as the SWRCB next month will begin a two year hearing process to develop better standards. This revision will be sent to EPA and at that time we will either approve or disapprove.
2. Is EPA's action, by neither approving nor disapproving the striped bass standards, in violation of the law?
  - The Clean Water Act requires EPA to approve or disapprove water quality standards submitted by the State. These standards are clearly not approvable. What we have done may be inconsistent with our regulations. But we believe that in this instance there are mitigating circumstances. For instance, in the case of a disapproval, the Act also requires that EPA detail the changes that are necessary to make the standards approvable, and to promulgate standards if the State fails to make these changes within 60 days.

We do not believe that such changes are possible to specify at this time. The State Board is about to begin a comprehensive review of all of the standards for the Delta. For these reasons we chose not to formally disapprove the striped bass standards at this time.

3. Is it not true that the State Board transmitted these standards to EPA for approval in June of 1985? Does not the Clean Water Act require you to act within either 60 or 90 days? Why did it take EPA two full years to conclude your review of these standards?

- Yes it is true that we received the State's submittal in 1985. However, we informed them from the outset that we had problems with the approvability of the striped bass standards, and provided them with the opportunity to provide additional information that would support the adequacy of these standards. We had expected that they would be able to address our concerns by the time they adopted their workplan for the upcoming hearings, which was adopted by the Board this past February. When that did not occur, we proceeded with the action that has now been taken.

4. What legal status does your action give the existing striped bass standards?

- The standards remain in effect until the State completed its upcoming hearings process. At that time, any revised standards must come to EPA for our approval/disapproval. We will evaluate what the State submits to us at that time.

5. Do you believe that the State Board will actually make any changes to these standards as a result of the upcoming hearings?

- I do know that by our letter they have been put on notice that the status quo is no longer acceptable. By that I mean that it is our position that the beneficial use - e.g. the striped bass fishery - is not, at present, being adequately protected, and that the State Board must, through the upcoming hearings, remedy this situation.

6. What do you believe are the short and long term effects of EPA's action?

- In the very near term, nothing will change. The standards remain in effect, and the State Board will presumably abide by its schedule to conduct the planned review of all of the water quality standards for the Delta.

However, I do believe that it sends a very clear message to Sacramento that the status quo is no longer acceptable. EPA takes the water quality standards setting and review process very seriously, and we will be watching and reviewing what new standards result from the upcoming hearings. We have definite expectations of this review process - that fish and wildlife of the estuary will receive increased protection.

7. What effect does EPA's action have on water resources development in California?

- In my letter to Chairman Maughan, I indicated that the fish and wildlife of the Bay-Delta estuary may in actuality require more freshwater than is presently being provided. I also informed him that it is EPA's position that the State Board should not allow any incremental diversion of freshwater that might be destined for the Delta and San Francisco Bay above that which is already permitted.

United States  
Environmental Protection  
Agency

Regional Administrator  
215 Fremont Street  
San Francisco CA 94105

Region 9  
Arizona, California  
Hawaii, Nevada  
Pacific Islands

Bill M



FOR IMMEDIATE RELEASE:

Wednesday, July 1, 1987

Contact: Al Zensky, U.S. EPA  
(415) 974-8083

**U.S. EPA APPROVES CALIFORNIA WATER STANDARDS BUT ANNOUNCES THAT STRIPED BASS STANDARDS FAIL TO PROTECT FISHERY OF THE SAN FRANCISCO BAY DELTA**

(San Francisco)—The U.S. Environmental Protection Agency today approved the state of California's water quality standards for the delta of the Sacramento and the San Joaquin rivers, with the exception of portions of the standards set for the protection of the striped bass fishery in the delta.

In a letter to the chairman of the State Water Resources Control Board, the regional administrator of EPA's offices in San Francisco, Judith E. Ayres, wrote, "EPA cannot approve the two striped bass standards because the administrative record...clearly indicates that these standards have failed to protect the fishery."

"EPA has an unswerving commitment to maintain the water quality of the estuary," Ayres added. "It is mandatory that the state's public hearing process, presently underway, results in standards which provide assured protection for the resource."

Ms. Ayres stated that although EPA determined the striped bass standards to be inadequate, the Agency chose not to formally disapprove the striped bass standards under its federal Clean Water Act authorities because the State Board has already committed to reviewing these standards through a series of public hearings, scheduled to begin this month.

EPA based its determination of the inadequacy of the striped bass standards upon a persistent decline in the Striped Bass Index. This index measures the relative abundance of "young of the year" striped bass. The State Board predicated the development of the striped bass standards upon the commitment that they would be sufficient to maintain the Striped Bass Index at an average level representing the population that hypothetically would have existed in the absence of the State Water Project and the Federal Central Valley Project.

- more -

Under Section 303 of the Clean Water Act, states are required to develop water quality standards to protect the beneficial uses of all of the states' waters. The state is also required to review these standards at least once every three years and revise them if necessary. Both these actions are sent to EPA for review and approval. The State Water Resources Control Board originally developed the striped bass standards in 1978 as part of the Water Quality Control Plan for the Sacramento/San Joaquin Delta and Suisun Marsh, or Delta Plan. EPA's letter was in response to the State Board's "Second Triennial Review" of the water quality standards contained in the Delta Plan.

# # #



Environmental Protection Agency  
Region 1X  
215 Fremont St.  
San Francisco, CA. 94105

21 DEC 1984

Honorable Thomas H. Bates  
California State Legislature  
State Capitol  
Sacramento, CA 95814

Dear Assemblyman Bates:

Thank you for your letter of November 30, 1984 concerning California's water problem. I would like to commend you on your efforts to clearly define and summarize this complex issue. While the Environmental Protection Agency (EPA) concurs with the definition, we would like to emphasize some of our concerns.

The second triennial review of the Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisan Marsh has recently been completed. From the information provided by the California State Water Resources Control Board and the testimony that was given at the November 7, 1984 workshop, EPA has concluded that the existing water quality standards are not adequately protecting the designated beneficial uses of the Delta. Since the adoption of the Delta Plan, the abundance of young striped bass has been well below the levels predicted, based on historical data. Agriculture in the Southern Delta is not adequately protected under the current plan. In addition, no flow standards have been established for the protection of San Francisco Bay. Before a comprehensive water plan can be developed, it is essential that the water quality needs of the Bay/Delta estuary be more clearly established. Until this has been accomplished, it is not possible to determine what constitutes "surplus water".

Another element that needs to be addressed in a comprehensive water plan is a realistic water demand projection. This must take into account any proposed increases in the price of water, and the resulting impacts on water demand. In addition, the potential water use reductions that could be obtained from conservation and improved irrigation management should be included as an essential part of the water demand estimate. The estimate of water demand must come from an unbiased source which has no vested interest in promoting water development. Until an accurate estimate of water demand is compared to an estimate of "surplus water", it is impossible to determine the magnitude of the problem.

One of the major environmental problems facing the State of California is the agricultural drainage problem. The situation at Kesterson Reservoir has clearly demonstrated the adverse impacts associated with the disposal of subsurface agricultural drainage. However, this problem extends beyond Kesterson Reservoir in that evaporation ponds are being constructed throughout the San Joaquin Valley, and discharges of subsurface and return flows to the San Joaquin River are also occurring. Until an environmentally sound solution for the disposal of agricultural wastewater is found, additional water development in the region may exacerbate this problem.

Another concern is the operation of the two export projects. EPA strongly supports the idea of the development and implementation of a new coordinated operating agreement between the Central Valley Project and the State Water Project. This agreement should commit the two projects to meeting state adopted and federally approved water quality standards. This would assure that each project share in the responsibility to protect the beneficial uses of the Bay/Delta, while enabling the projects to operate more efficiently.

If we can be of further assistance, please let me know or your staff may contact Catherine Roberts, Intergovernmental Affairs Officer at (415) 974-7654.

Sincerely,

ORIGINAL SIGNED BY:

JUDITH E. AYRES

JUDITH E. AYRES

Regional Administrator

bc: AL-103, EPA HQS

project number:	783abcd
mckeown/draft:	12-12
mckeown/re-draft:	12-14/12-18
mckeown/final:	12-20
harold disk:	#1

**THE BAY INSTITUTE  
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10/21  
Referred To W-1  
CC: P-1  
CC: \_\_\_\_\_  
File: \_\_\_\_\_  
File: \_\_\_\_\_

'85 OCT 21 A1 21

October 18, 1985

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Judith E. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street  
San Francisco CA 94105

re: Comments on State Board's  
Workplan for Delta Plan  
Hearings

Dear Ms. Ayres:

I am enclosing my letters of comment to the State Water Resources Control Board, dated October 2 and October 4, on the above subject.

I would call your attention to the comments made on pages 4 and 5 of the October 4 letter regarding the Striped Bass Index and the function of the SBI in the standards the State applied, with EPA conditional approval, in the Delta Plan approved in 1978.

In my opinion the State is manifestly in violation of the conditions EPA applied in its approval of the original Delta Plan, which -- for fishery protections -- was keyed to a standard of a Striped Bass Index of 79.

I suggest that this translates into nonconformance with an approved federal-state plan under Section 303(c) of the Clean Water Act.

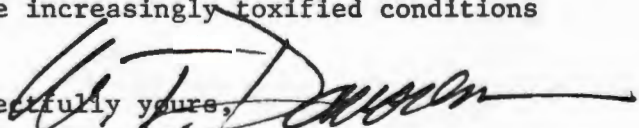
At a meeting of the Board of Directors of the Bay Institute, to be held on October 26, I will seek guidance from our Board on the best course of action the Institute should take to reverse that catastrophic decline of the striped bass fishery of the Bay-Delta system. It appears that any feasible action by us must involve EPA in its oversight and enforcement role over approved federal-state water quality control plans and the increasingly toxified conditions of the Bay-Delta system.

**William T. Davoren,**  
Executive Director

5080 Paradise Drive  
Tiburon, California  
94920

415/435-5922  
Cable: BAYSPEX

Respectfully yours,

  
William T. Davoren, Executive Director

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Davis

Will Siri  
El Cerrito

Mr. Leo Winternitz  
State Water Resources Control Board  
P. O. Box 2000  
Sacramento CA 95810

October 4, 1985

re: Comments (# 2) on Draft  
Workplan for Bay-Delta

Dear Mr. Winternitz:

The following comments are intended to document or extend statements I made during the September 5 workshop on the above subject on behalf of the Board of Directors of the Bay Institute of San Francisco.

I have also submitted comments under date of October 2, 1985.

For ease of reference, my comments are keyed to statements of the Draft Plan in order of appearance therein.

## Page 2    Regional Board and Regional Board Basin Plan Roles (1.1)

The State Board does not, and dares not, assign control of serious systemic pollution of the Bay-Delta to Regional Boards and the basin planning process. Events of the past three years have forced a change in this approach.

The State Board's action on the presently uncontrolled toxic wastes entering the San Joaquin River, e.g. selenium from natural sources, demonstrates the only scientifically acceptable approach the Board can apply. In the case of selenium, this approach is doubly correct because one of the major projects the Board is attempting to govern in the Delta Plan, the Central Valley Project of the Bureau of Reclamation, supplies most if not all of the irrigation water -- and operates some of the drainage facilities -- which presently are causing the systemic pollution and degradation of the San Joaquin River above or at the river's entry to the delta.

Furthermore, the State Board's present information base, salinity, trace metal and other data resulting from the enforcement action taken by the Board on February 5, on pollution of the San Joaquin River, should be included in the record and the proceedings as the Board reviews the adequacy of the interim standards established in the Delta Plan of August 1978.

William T. Davoren,  
Executive Director

5080 Paradise Drive  
Tiburon, California  
94920

415/435-5922  
Cable: BAYSPEX



Page 3 "...selected other post-1914 appropriators..." (1.3)

Inclusion of post-1914 appropriators is advisable. An earlier SWRCB report stated that there are "more than 15,000 water users with rights" to the waters of the Sacramento-San Joaquin system. More "rights" are formed each passing week, as the Board's far-reaching powers are applied to large and small water users.

To this date no river flows have been calculated nor reserved to meet the economic, environmental, chemical or biological needs of San Francisco Bay. The two large projects subject to this hearing process are not willing, and are probably not able, to meet all the mitigation requirements required at this relatively advanced state of development (e.g. historic levels of fisheries).

Obviously, the Central Valley Project and the State Water Project must give up something. In practical terms, extending the mitigation requirements to all other water users must be accompanied by an immediate moratorium on any further exploitation of the Sacramento-San Joaquin river systems to benefit these two large public projects. Present evidence, i.e. collapse of the Striped Bass Index, underscores the need for immediate and unprecedented actions by the Board. Equity for all water users, and the public trust in the Board's scientific and political integrity, are at stake.

Page 5 Final Determinations -- hearing process taking three years

The hearing process is at least one year too long -- as underscored by jokes and comments regarding permanence of some Board appointees and the advancing ages of certain major interested parties.

Due to the collapse of the Striped Bass Index, and the increasing scale of the pollution of the State's waters caused by irrigation of alkaline lands of the western San Joaquin Valley, more immediate attention by the Board is vital. The hearings should begin this year (1985), and should end as originally scheduled in 1988.

Conditions are no longer stable enough to allow a schedule that is convenient only to established public and private water right owners and a comfortable pacing of staff activities expressed through the annual budgeting procedure and personal retirement plans.

Further, the sooner the process starts the sooner the Members of the State Board can begin learning the intricacies of this most important water quality and quantity plan of California.

Along this line, it appears the schedule of hearings as proposed does not allow for sufficient participation by the Members themselves until the final year. There must be more direct participation by Members in the earlier stages of these multi-year hearings. Also the final year of hearings should involve more public participation than now envisaged.

## Page 6

### Existing hydrological conditions (2.3 [1])

Before the existing effects of the CVP and the SWP can be comprehended, and evaluated in scientifically supportable terms, the pre-development hydrology of the entire system must be established and be made an important facet of the Board's determinations.

For starters this means that the "pre-historical" hydrology and salinity of the estuary must be calculated. In this reference "pre-historical" means pre-1850, and extending into the past to the extent supported by modern scientific techniques. Techniques should include consideration of long-range-past hydrology, as calculable through application of dendrochronology, geological core sampling of sediments, movement of trace metals within the drainage basin, and sum spot activities of the past several hundred years.

Neither of the two large public projects, CVP and SWP, had the benefit of long-range hydrological information when their yields were formulated in prior decades. (In the 1920s, for what became the Central Valley Project, and in the 1940s and 1950s for what became the State Water Project.)

Now that development has reached its probable limit, we still are only able to manage our annual natural so that it can stretch over two years. There is little or no margin for error, and one of the most serious data needs for proper management is improved application of existing long range forecasting techniques.

The Board should require its staff to investigate and to apply the most modern methods available in this area. As illustrated by the Board's earlier report on alternative flow/salinity scenarios\*, only old techniques are to be applied and the Board staff is accepting the given hydrology prepared and applied by the CVP and the SWP managers for many years. These are always based on "post-dam hydrology", and are an inadequate engineering or scientific response to today's conditions of advanced deterioration of the Bay-Delta estuary.

\* "Staff Report on Development of Alternative Flow/Salinity Scenarios for Use in Setting Future Flow and Salinity Standards for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, February 1985.



Page 8      Striped bass fishery, as index and indicator species (2.3[5])

Please note several exhibits attached. These were prepared by the Bay Institute and others, and are pertinent to any discussion of the fishery protection standards of the interim or proposed Delta Plan.

Speaking figuratively, the fishery standards of the interim Delta Plan form an inverted pyramid which rests upon the foundation known as the Striped Bass Index (SBI).

Boards of several eras (e.g. D 1379) have relied upon the SBI. The SBI has been praised as the best YOY (young of the year) index in America. It has been used as the single parameter to protect all of the fisheries of the Bay-Delta estuary -- and inferentially to protect all other fish and wildlife species that depend on the Bay-Delta fisheries.

This romantic, non-scientific, management-oriented phase of managing the Bay-Delta estuary should now be over. The over-dependence upon the SBI -- as a water quantity or quality control mechanism -- should end immediately. Other controls are needed along with the SBI, or to supplant it, if the fishery values of the Bay-Delta estuary are to be maintained and restored.

The interim Delta Plan is based upon an SBI of 79 index units. The fishery flow and quality standards to protect fisheries in the Delta Plan call for an SBI of 79. Since 1977, the highest SBI reached is 48. The lowest SBI in history occurred this year when it bottomed out at 6.3. Even in the drought years of 1976 and 1977 (SBI 9.0), the SBI was higher than in 1985. See Exhibits.

The gap between the predicted and observed (actual) SBI has been apparent since 1977. This raises the obvious question of adequacy of the Delta Plan. In the required 1981 triennial review of the Delta Plan, EPA noted the failure of the SBI to perform as required by the Plan. Now the Environmental Protection Agency must again review the Delta Plan, as the 1984 Triennial Review has rolled around. The conditions applied by EPA in its approval of the Delta Plan, under Section 303(c) of the Clean Water Act, include the following:

"2. If it is shown that there is a measurable adverse effect on striped bass spawning\*, then a complete review of the Striped Bass Spawning Standard Relaxation Provision ... shall commence immediately..."

"If there is a measurable decrease\*\* in the Striped Bass Index (SBI) below that predicted, the SWRCB shall commence immediate actions to review and revise the Delta Plan standards such that 'without project' levels of protection are attained. It is our understanding that an average SBI of 79 represents 'without project' protection."

Page 8     Striped bass fishery, as index and indicator species (2.3[5])

EPA conditions cont.

\* "A measurable adverse effect on striped bass spawning" means the following: the Striped Bass Index (SBI) for the individual year is decreased by more than three standard deviations from that which would otherwise be predicted using the relationships shown on Figures III-27 and III-28 of the Final EIR for Delta Plan adopted August, 1978.

\*\* Measurable decrease means either:

(1) three consecutive years where the SBI is decreased by more than one standard deviation below that which would otherwise be predicted for each year using the relationships shown in Figures III-27 and III-28 of the Final EIR of the Delta Plan adopted August, 1978; or

(2) six consecutive years where the SBI is below that predicted for each year, using the above relationships.

(End of EPA conditions on SBI application in Delta Plan.)

The failure of the SBI as a control parameter, it would appear from the above conditions, is now a legal reality.

Obviously, the EPA could, and probably should, call upon the State to begin immediately the hearings that are part and parcel of the interim plan to review and upgrade the standards for fishery protections. For planning purposes, the staff and the Board are well advised to go much beyond the simplistic questions (a,b,c & d) on page 8 in order to develop acceptable fishery protection standards for meeting the requirements of Porter-Cologne and the federal Clean Water Act.

Separate flow and quality standards should be included in the revised standards to protect salmon, other migrating and resident fishes, including shellfish and crustaceans.

All other aquatic life, including the largest mammal resident in the Bay, the seals, and the smallest, probably zooplankton, must also be considered as proper subjects for standards in the revised plan.

Shellfish, crustaceans, seals, other mammals, zooplankton and phytoplankton are not mentioned specifically in 2.3(6) or 2.3 (7). These should be added.

No longer can the striped bass (Morone saxatilis) be expected to represent all other species as a non-voting participant in the decisions of the State Board concerning the Bay-Delta estuary.

Page 9      San Francisco Bay Freshwater Inflow Needs (8)

8.a. Add the words economic, environmental, chemical and biological to "physical environment" for clarity.

8.b. Add the word "real" so as to read "real and theoretical benefits of freshwater inflows for key organisms inhabiting San Francisco Bay."

8.d. For clarity, please restate this issue as follows (additional words underscored):

"d. To what extent do pollutants from local discharges, runoff or the San Joaquin River and other factors, such as sediment, affect the flow/abundance relationships for key organisms in San Francisco Bay?"

See my letter of October 2 for more recommendations on the issue of sedimentation.

8.e. Add the words shown underscored, for completeness:

"e. What are the relationships between the abundance of key organisms and the number of adult fish, shellfish, mammals (seals & crustaceans (i.e. Dungeness crab juveniles)) recruited into the Bay fishery?" See Dungeness crab Exhibit attached.

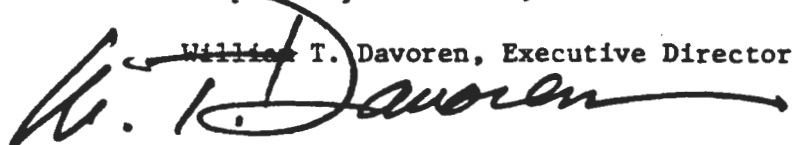
8.f. "Reasonable levels" of protection for key organisms should include life support elements required for a sustained population of all species, not just prime game and sport fish such as the striped bass. In addition to cut-and-dried levels of "historic" populations, these parameters could include certain water quality levels for specific known toxics , e.g. selenium, which are noted for devastating effects on aquatic life in minute concentrations in the water column. For example, system-wide waste load allocations of selenium discharges may be required.

Note: The utility of the new Department of Fish and Game/ SWRCB/Regional Board index, the Striped Bass Health Index, should be investigated in this connection.

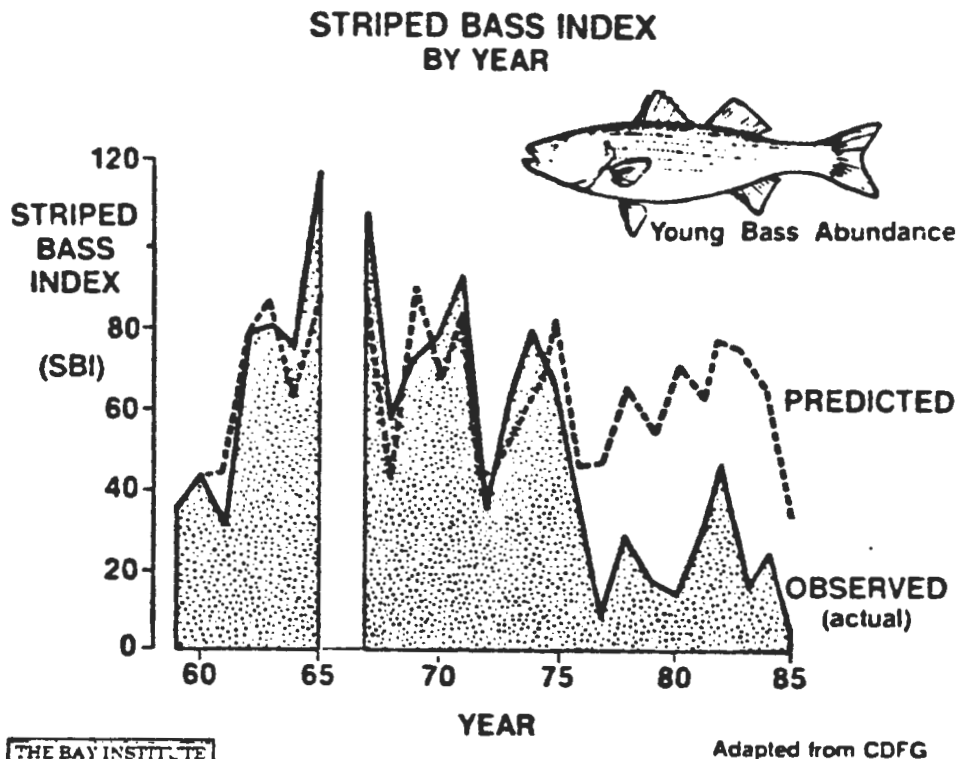
This concludes my comments. We appreciate the opportunity to take part in these hearing processes and the pre-planning involved. Personally, I have been an interested spectator to the hearings since 1978, and a legally involved "interested party" since June of 1981.

Respectfully submitted,

William T. Davoren, Executive Director



Exhibits attached

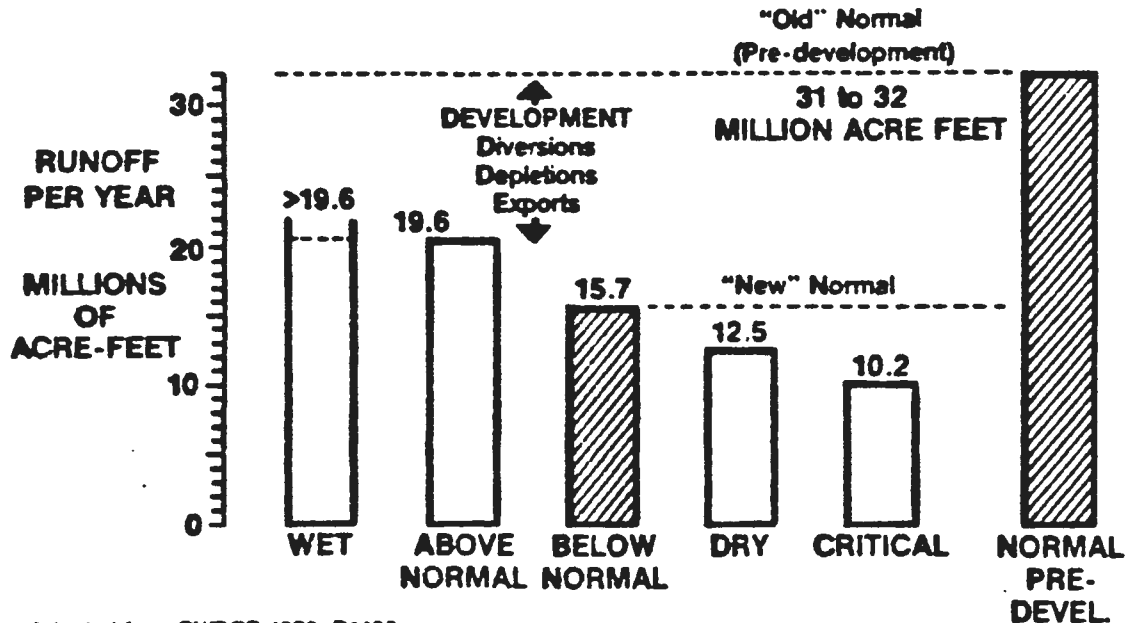


The Striped Bass Index correlated well with river flows and project diversions from 1959 to 1976, but has mystified biologists and engineers since 1977. The lowest index figure since 1959 (6.3 SBI) was recorded in 1985, despite average runoff flows, despite controls in an approved federal-state water quality and fisheries protection plan (the Delta Plan), and despite the fact that an SBI of 79 is called for in that plan. The 79 SBI is designed to reflect young bass abundance if the federal Central Valley Project and the State Water Project did not exist. Compared to this "without project" standard, the federal-state fisheries specialists estimate that the average abundance of young striped bass for the period 1922-1967 was 106 index units. All of this work surrounds water project planning and the need to seek "mitigation" from project sponsors. It also represents a bygone era in terms of scientific adequacy of such single-species planning. For example, the top number on the SBI scale is 120; the remedial fisheries and water delivery project known as the Peripheral Canal (voted down by California electorate in June 1982) was projected to provide an annual SBI of 110.

However, with the abject failure of the SBI since 1977, the severe shortcomings of such earlier project planning are now self-evident. The Bay-Delta estuary is more complex, and less subject to management by man, than previously thought.

## RUNOFF PER YEAR — SACRAMENTO VALLEY

(Year Classification by Volume)



Adapted from SWRCB 1978: D1485

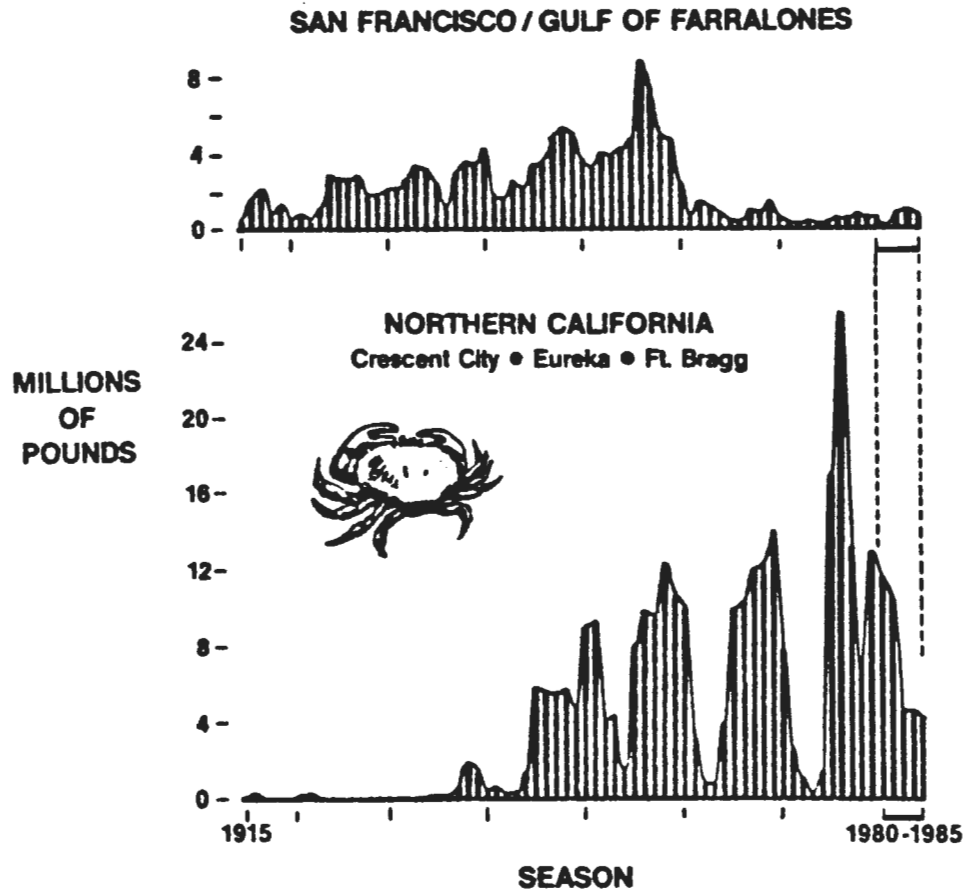
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As described in this rendering of the SWRCB's official "Year Classification" diagram, water development already has captured at least one-half of average year runoff flows, and undoubtedly much more than one-half in below normal, dry and critical years. Developments planned to expand the State Water Project and the federal Central Valley Project will capture at least another 25 percent of average year flows, according to the Bay Institute of San Francisco. (No flows have yet been reserved for San Francisco Bay's economic and/or environmental needs by the State Water Resources Control Board.)

Prepared and submitted by the Bay Institute of San Francisco



## THE DECLINE OF THE DUNGENESS CRAB IN THE BAY



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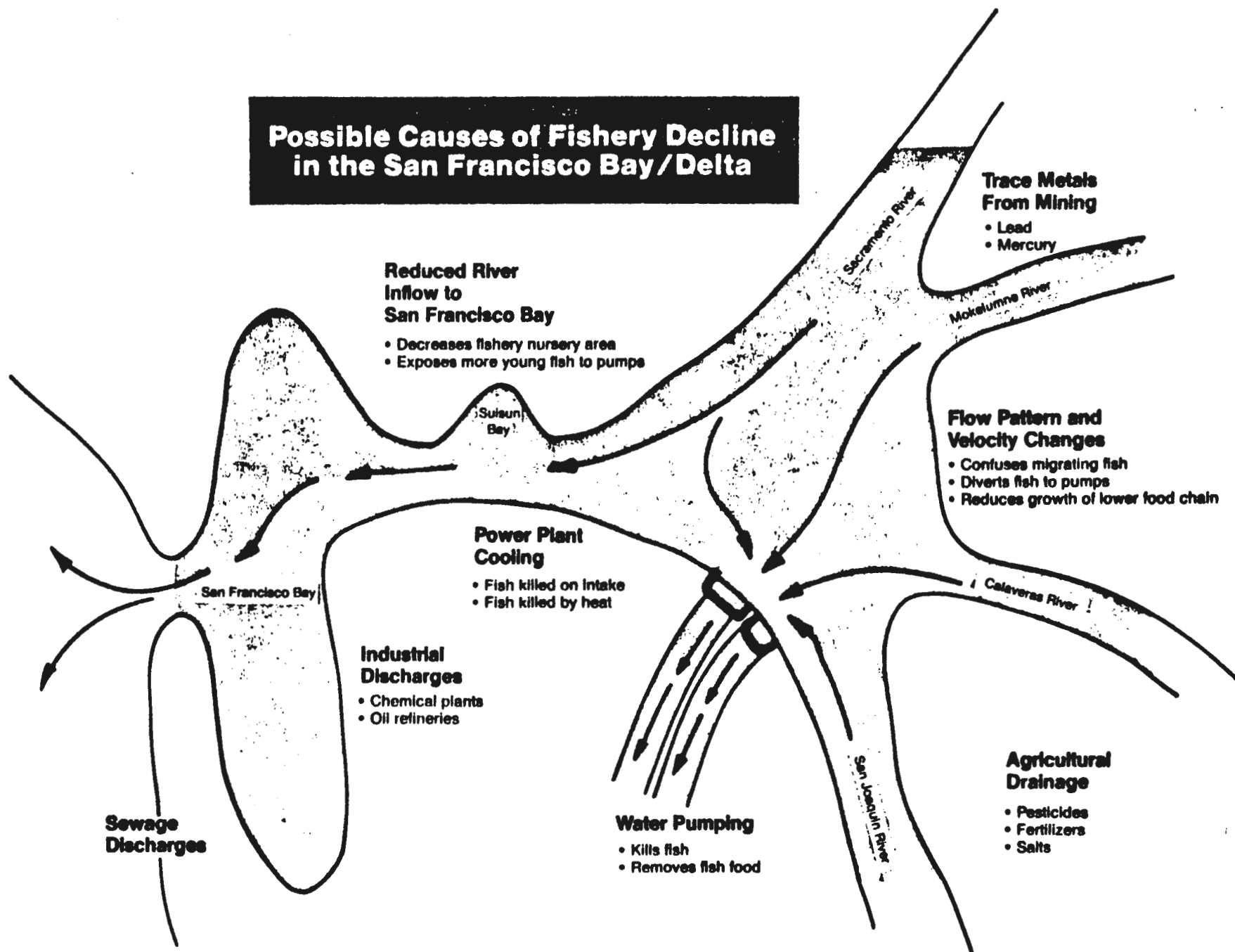
Adapted from CDFG Fish Bulletin 172

Prepared and submitted by the Bay Institute of San Francisco

The Department of Fish and Game does not believe the sustained population decline of the Gulf of Farallones crab fishery relates directly to deteriorating conditions in the estuarine environment of San Francisco Bay. Many Dungeness crabs enter the Bay at a very early stage of development, and return to the Pacific Ocean 12 to 15 months later. The number of crabs entering the Bay is probably a direct reflection of Delta outflow in that the more Bay waters that discharge to the ocean at Golden Gate the more strong are the ocean currents entering the bay. The heavier ocean waters scour the bottom of the bay, distributing the very small crabs and other marine-estuarine forms of life throughout the Bay system.

Prepared and submitted by the Bay Institute of San Francisco

# **Possible Causes of Fishery Decline in the San Francisco Bay/Delta**

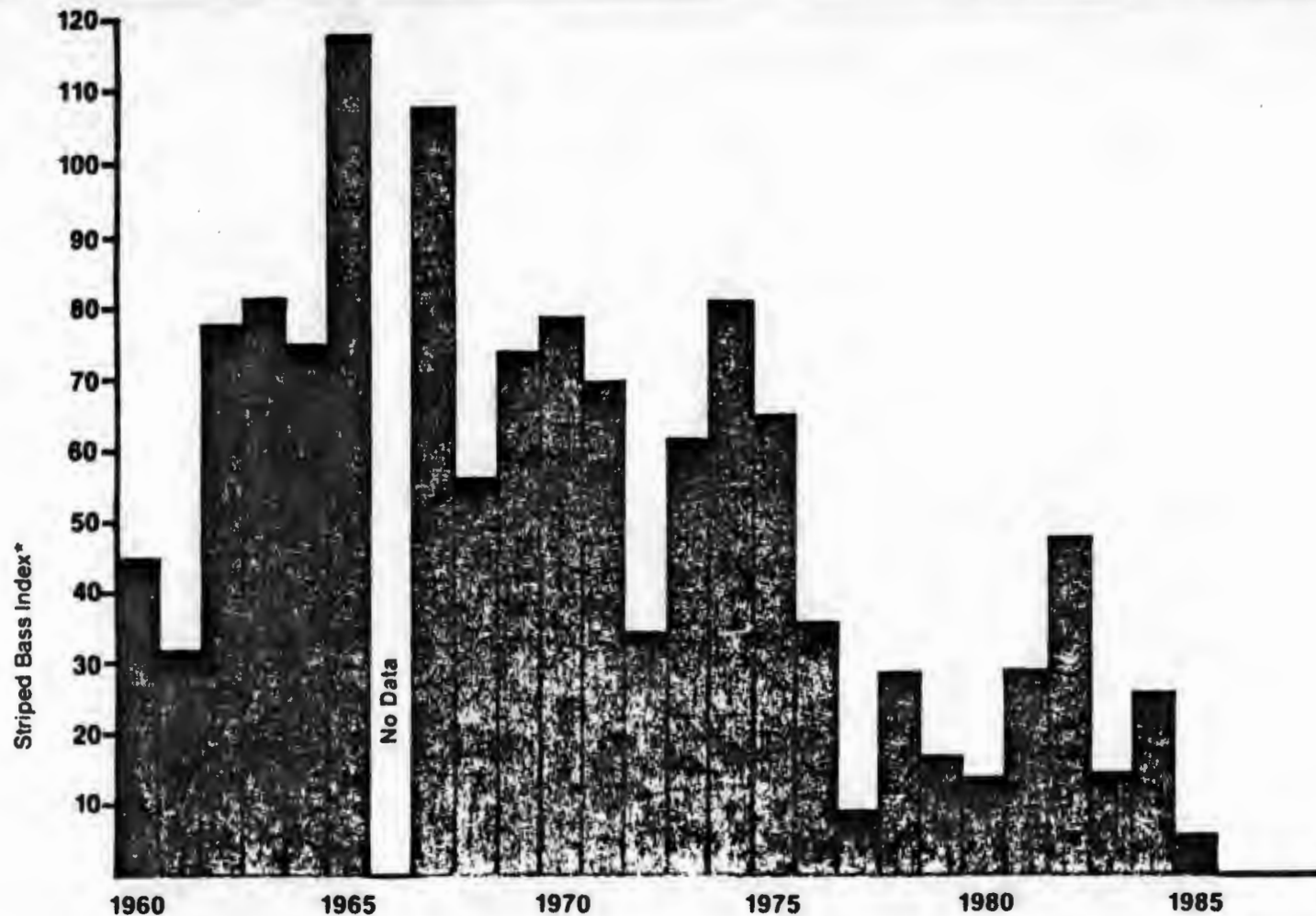


Letter to L. Winternitz SWRCB October 4, 1985

EXHIBIT B cont.

Distributed at press conference called by--  
Assemblyman Tom Bates, San Francisco, October 3, 1985  
(Submitted to SWRCB by the Bay Institute of San Francisco)

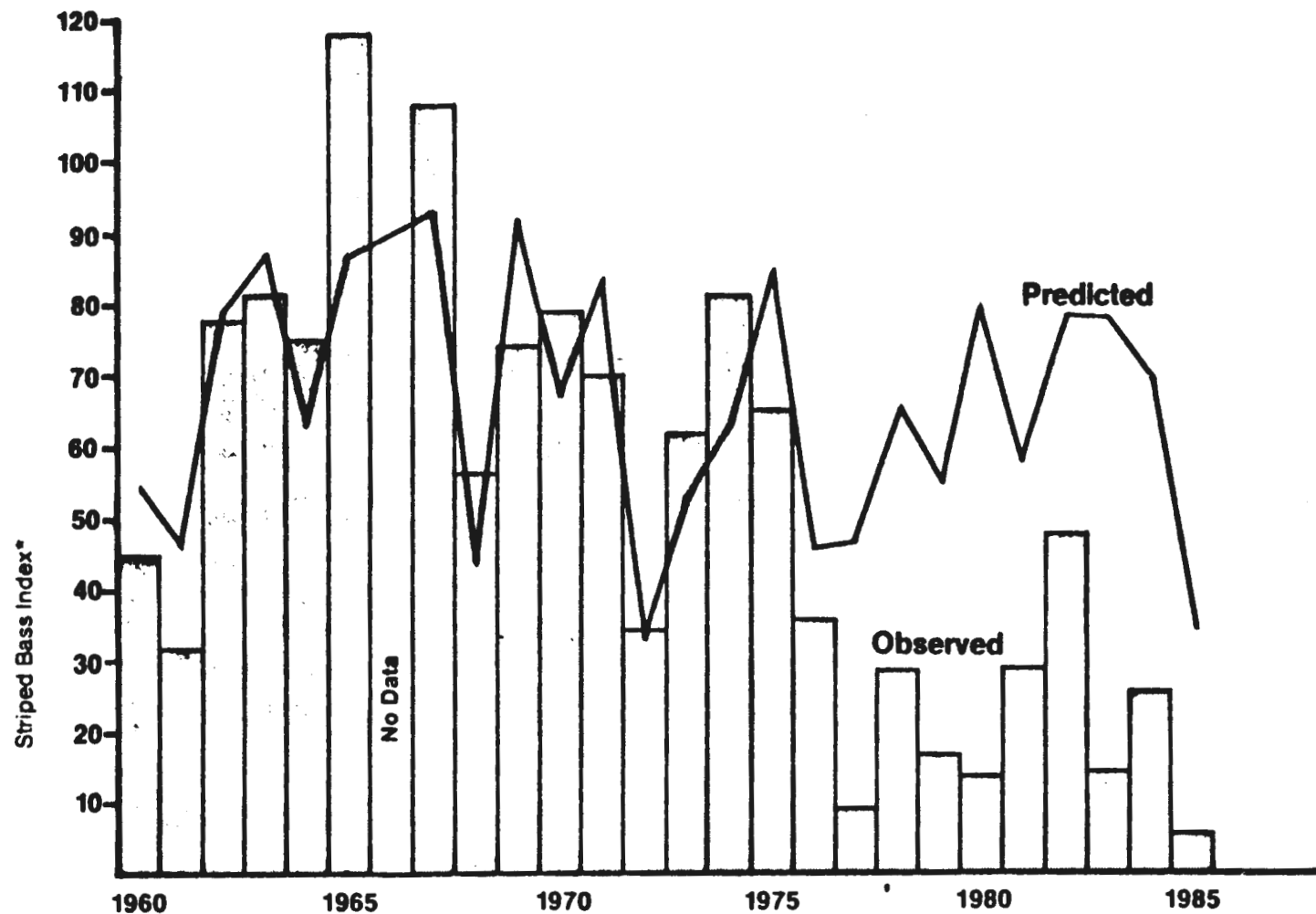
# San Francisco Bay-Delta Striped Bass Fishery



\*Index of the relative abundance of young striped bass.

Distributed at press conference called by Assemblyman  
Tom Bates, San Francisco, October 3, 1985  
(Submitted to SWRCB by the Bay Institute of San Francisco)

# San Francisco Bay-Delta Striped Bass Fishery Predicted vs. Observed



\*Index of the relative abundance of young striped bass.

Distributed at press conference called by  
Assemblyman Tom Bates, San Francisco, October 3, 1985  
(Submitted to SWRCB by the Bay Institute of San Francisco)

# THE BAY INSTITUTE OF SAN FRANCISCO

*a public service research organization*

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Mr. Leo Winternitz  
State Water Resources Control Board  
Division of Water Rights  
P. O. Box 2000  
Sacramento CA 95810

October 2, 1985

re: Draft Workplan for 1986  
Bay-Delta Hearing Process

Dear Mr. Winternitz:

These comments follow remarks made by Dr. Joel W. Hedgpeth, and advisor to this Institute, at the hearing on September 5.

The subject of sedimentation is not included in the section of the Draft Workplan numbered 2.3. This is a serious omission.

Historically, sedimentation has come in all shapes and sizes in the River/Bay/Delta system. The largest impact was due to hydraulic mining, ruled illegal by a Federal Court in 1884. More recently, shoreline filling of the margins of San Francisco Bay was stopped. Now sedimentation involves mostly fine particles, from both natural and anthropogenic sources, but these exercise a decisive control over water quality parameters of the Bay/Delta system.

Today the study of sedimentation includes study of the movement of chemical, mineral and organic substances in a given water system. Now we realize that residues from herbicides and pesticides, typified for our system by chemicals applied by rice farmers on the Sacramento River, and trace metals, typified best perhaps by the entry of selenium into the Bay/Delta waters from agricultural, industrial and municipal sources, as well as particles of other toxic substances, are moved about through the Bay/Delta system and finally settle out largely as a matter of fine-particle sedimentation processes.

Recently completed work on sedimentation processes of the New York Bight and the Hudson River shelf valley, produced by the National Oceanic and Atmospheric Administration, provides a state-of-the-art prototype for considering the modern sedimentation problems affecting water quality in our Bay/Delta system.

I refer to "Dispersal Pathways for Particle-Associated Pollutants," by Robert A. Young et al, which appeared in the August 2 issue (Vol 229) of Science. One xerox copy of this paper is enclosed.

William T. Davoren,  
Executive Director

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The findings of the New York work may also be applicable to some conditions found in our Bay/Delta.

To help dispell the notion that sedimentation involves only erosion, dumping and filling, the following quotation is offered from the cited report (p.431):

"Solid wastes from some 20 million people ... While ocean dumping is the most important source, wastes also arrive through sewer outfalls, eolian transport, river discharge, land runoff, and vessel wastes and spills. The wastes dumped include sewage sludge, dredge material, acid waste, and construction and demolition debris (cellar dirt)(1). A review of chemical pollutants of the New York Bight (2) has concluded that the major perceived threats are from chlorinated pesticides, lead, mercury, polynuclear aromatic hydrocarbons, polychlorinated biphenyls, and plutonium (2). Dredge material contributes the major part of the input (24 to 60 percent) of cadmium, chromium, copper, iron, lead, and zinc (1). Wastewater contributes 70 percent of the mercury; wastewater and runoff also contribute organic carbon, nitrogen, phosphorus, and the microbial load (1). Various effects of contaminants have been reported ..."

"Because pollutants are associated with fine sediment particles, their fate in the New York Bight is intimately related to sediment transport processes. Progress has been made toward understanding and, to some extent, quantifying processes that affect fine sediment dispersal in the inner bight...."

Not only water quality but also water quantity, e.g. river volume flows, plays a pivotal role in determining transport and final resting place of sediments in the estuarine system. Thus, a thoroughly scientific consideration of the function of sediment in the Bay/Delta system fits as well into the D 1485 aspects of the proposed hearings as into the water quality aspects which are to be considered in the form of the interim standards provided in the (1978) Water Quality Control Plan for the Delta and Suisun Marsh ("Delta Plan").

The final paragraph from the above-cited paper is pertinent, in terms of applications for our own Bay/Delta system:

"Because of the distributive nature of the apex system, particles tend to go to depositional sinks determined by natural transport processes, regardless of their source. These sinks are inferred to be largely within the intracoastal zone of marshes, estuaries, and lagoons, and it is these areas that may determine the pollutant-related assimilative capacity of the New York Bight apex as a whole."

Due to the geomorphology of the Bay/Delta system, the New York Bight in the above references may be read as "San Francisco Bay" for making practical comparisons between the two systems.

Thank you for considering these comments and recommendations. Do not leave out sedimentation, and include it in modern dress, please.

Respectfully submitted,

  
William T. Davoren, Executive Director

encl.  
cc: Dr. Hedgpeth



**THE BAY INSTITUTE  
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11/12  
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File  
November 7, 1985

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Ms. Judith E. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street 5th Floor  
San Francisco CA 94105

Dear Ms. Ayres:

The Board of Directors of the Bay Institute discussed the distressing decline of the young-of-the-year striped bass (Morone saxatilis) populations during its October 26 meeting. The Board directed me to write this letter to you.

Aside from its importance as a symbol of a healthy, self-renewing aquatic environment for a century, the striped bass of the Bay-Delta system represents weighty legal, financial, political, water flow and ecological commitments made by public officials and agencies during the past 50 years.

With its predecessor health agencies, EPA has had only a peripheral role in the public agency decisions of the past. This must change, and the opportunity to make this change is now at hand.

Ever since the passage of the Clean Water Act and its counterpart state legislation, Porter-Cologne, EPA and the State Water Resources Control Board have provided a regulatory system designed to assure protection of the quality of California's public waters. The first major effort in California to protect a water system's permanent viability under Porter-Cologne is the D 1485/Delta Plan\* action of the State Board.

The D 1485/Delta Plan affects only the two major public water development agencies in California: the federal Bureau of Reclamation and its Central Valley Project, and the Department of Water Resources' State Water Project. Between them these two water projects control streamflows, diversions, exports, and generate agricultural drainage wastes, that control the fate of the Bay-Delta estuarine system generally and the survival of the striped bass populations specifically.

The State Board's approach combining water quantity and water quality standards for the Delta and Suisun Marsh is an approved Federal-State water quality standards plan under Section 303(c) of the Clean Water Act.

**William T. Davoren,**  
Executive Director

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\* Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh, 1978.

When the Regional Administrator approved the 1978 D 1485/Delta Plan,<sup>1/</sup> certain interpretations of the document were stipulated. The EPA regarded the premise of the State Board's levels for the fish spawning and some of the salinity control parameters on the historic calculations of the Striped Bass Index as an integral part of the approved water quantity/quality control effort. EPA was particularly specific regarding the Plan's dependence upon established practices and available data keying the plan's controls to "without project" conditions.

In short, the goal of the D 1485/Delta Plan was a Striped Bass Index of 79.

The following excerpts from EPA's official letter of acceptance of the D 1485/Delta Plan make no mistake about this reliance on the historic striped bass research work of the federal and state agencies responsible for mitigating effects of the projects on the aquatic environment:

2. If it is shown that there is a measurable adverse effect on striped bass spawning\*, then a complete review of the Striped Bass Spawning Relaxation Provision (at the Antioch Waterworks Intake when project deficiencies are imposed) (Table VI-1, page VI-31) shall commence immediately. Similarly, if any change in Suisun Marsh Chipps Island standards is proposed, as part of that standard amendment process, a review and revision of the Relaxation Provision shall commence.

3. If there is a measurable decrease\*\* in the Striped Bass Index (SBI) below that predicted, the SWRCB shall commence immediate actions to review and revise the Delta Plan standards such that "without project" levels of protection are attained. It is our understanding that an average SBI of 79 represents "without project" protection.

---

\* "A measurable adverse effect on striped bass spawning" means the following: the Striped Bass Index (SBI) for the individual year is decreased by more than 3 standard deviations from that which would otherwise be predicted using the relationships shown on Figures III-27 and III-28 of the Final EIR for Delta Plan adopted August, 1978.

\*\* Measurable decrease means either:

(1) three consecutive years where the SBI is decreased by more than one standard deviation below that which would otherwise be predicted for each year using the relationships shown in Figures III-27 and III-28 of the Final EIR of the Delta Plan adopted August, 1978; or

(2) six consecutive years where the SBI is below that predicted for each year, using the above relationships.

Ms. Ayres, under either of the above 1980 caveats the D 1485/Delta Plan has failed to meet your agency's requirements. The Striped Bass Index, observed, since 1977 has posted the following annual levels:

1977	9.6	units	1980	14.0	units	1983	15.4	units
1978	29.6		1981	29.1		1984	26.3	
1979	16.9		1982	15.4		1985	6.3	

Since 1976, the gap between the predicted and the observed (actual) SBI has been a continuing mystery to the biologists and engineers responsible for developing the SBI and for calculating its annual levels. Although the failure of the striped bass fishery is a tragedy that may have been avoided, the double tragedy is that the entire system of water quantity/quality governance in California is based upon such weak and vulnerable "scientific" criteria. Please note attachments A, B, C.

Clearly, just as war or peace cannot be a decision made by generals, admirals and commanders, regulation of the Bay-Delta system can no longer be left to the discretion of cabinet secretaries and directors of the two major public water projects in California.

We realize that EPA's role in saving the striped bass, and probably other species that less is known about than the striped bass, is limited in matters dealing with state water rights determinations and in requiring discharge permits for agricultural waste discharges.

However, there should be no hesitancy on the part of EPA to act decisively in matters dealing with toxicants entering the Bay-Delta system. The D 1485/Delta Plan does not consider toxics sources, even though the exported waters of one of the major projects controlled by D 1485/Delta Plan -- the Central Valley Project -- has been shown to be a serious unregulated and unmonitored source of systemic pollution of the San Joaquin River, and hence the Delta and the Bay.

The Bay Institute has issued one report on this subject\*, and is continuing to document the systemic toxic threats to the Bay-Delta system.

With the Bay-Delta striped bass on the verge of extinction, there should be no further delay by EPA in applying whatever authority it can muster to assist, or require, the State Water Resources Control Board to force the two public project agencies to take actions favorable to helping the striped bass maintain natural reproduction.

In addition to EPA's organic authority in matters of controlling toxics entering the waters of the United States, please be aware that one of the basic thrusts of the Clean Water Act in the beginning -- and presumably today as well -- was to protect and preserve the nation's fisheries.

---

\* Decline of Bay-Delta Fisheries and Increased Selenium Loading: Possible Correlation?, by Alvin J. Greenberg and Dianne Kopec, published jointly by the Bay Institute of San Francisco and the Sierra Club of California (1985).

In view of the above, and realizing that an opportunity for emergency action now exists in the form of the formal review by you and your staff of the State Board's Triennial Review of D 1485/Delta Plan, we request that you take the following actions:

1. Do not approve the State Board's Triennial Review (1984) compliance, now pending.

Due to the failure of the Striped Bass Index, and the collapse of the striped bass fishery implied, request the State Board to begin hearings in early 1986 on either (1) the scoping of the D 1485/Delta Plan hearings, now scheduled for November 1986, or (2) emergency hearings on the question of the connection between the decline of the striped bass populations and toxics entering the Bay-Delta system from all sources, or both simultaneously.

2. Advise the State Board that, in view of the emergency facing the YOY\*striped bass populations this year and next year, a review of the Striped Bass Spawning Relaxation Provision should begin immediately, and in the event the 1986 water year is below normal the use of the Striped Bass Spawning Relaxation Provision should be withdrawn from the two project operating agencies.

(\* young-of-the-year)

3. Require the State Board's Delta Plan, under the authority of Section 303(c) of the Clean Water Act, to include management of systemic toxins which are not or cannot be controlled through the discharge permit programs or Basin Plans of the Regional Boards.

As the State Board demonstrated earlier this year, in the matter of Kesterson Reservoir pollution caused by the San Luis Drain, Regional Boards are not able at this time to control toxic substances entering the state's public waters from agricultural sources. The many and diffuse sources of wastes similar in constituents to the San Luis Drain wastes, we now know, have been entering the San Joaquin River from 103,000 acres of lands served primarily by the Bureau of Reclamation in the western San Joaquin Valley (Delta-Mendota Project service area). Some of these "tile drain" wastes have been disposed of directly or indirectly into the San Joaquin River for 30 years.

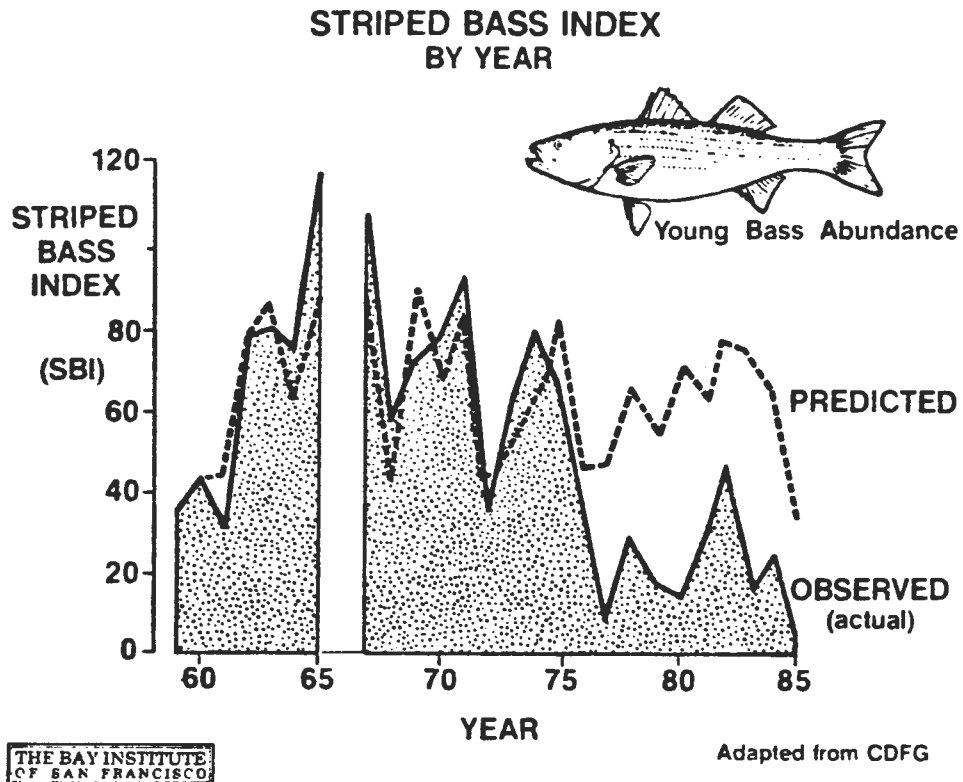
Sincerely yours,



William T. Davoren  
Executive Director

w/Attachments A, B, C

cc: TBI Directors only

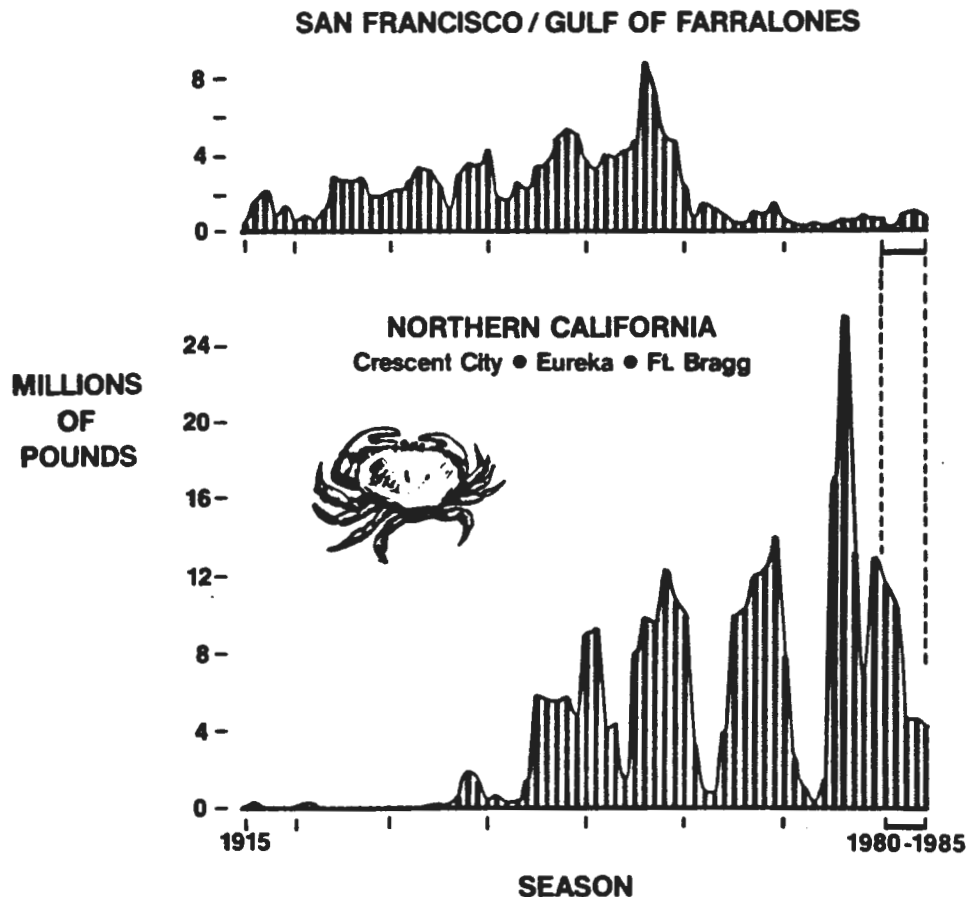


The Striped Bass Index (SBI) did correlate well with river flows, and water diversions of the large public projects (CVP, SWP), from 1959 to 1976. The failure gap shown above, for the years 1977-1985, has mystified biologists and engineers since 1977. The lowest SBI since 1959 (6.3 units) was recorded in 1985, despite average and above average annual runoff flows since 1978, despite fish protection controls in an approved federal-state plan (the Delta Plan) that calls for an annual SBI of 79 units, and despite many improvements the past decade in the quality of municipal and industrial waste discharges.

The SBI of 79 units is calculated to reflect what young-of-the-year striped bass abundance would be if neither the federal Central Valley Project or the State Water Project had ever been built. Compared to this "without project" standard, the federal-state fisheries experts estimate that the average abundance of young striped bass for the years 1922-1967 was 106 index units. All such data revolves around water project development practices of the past 40 years that are geared to each project providing "mitigation" and "enhancement" benefits to offset any deleterious impacts. As such it represents a bygone era of water management. (For example, the top of the SBI scale is 120 units; the remedial fisheries and water transfer project known as the Peripheral Canal, defeated by the California electorate in 1982, was projected to provide an annual SBI of 110. The abject failure of the SBI since 1977 exposes the severe shortcomings of such single-species planning.) Submitted by the Bay Institute of San Francisco.



## THE DECLINE OF THE DUNGENESS CRAB IN THE BAY



The Department of Fish and Game does not believe the sustained population decline of the Gulf of Farallones crab fishery relates directly to deteriorating conditions in the estuarine environment of San Francisco Bay. Many Dungeness crabs enter the Bay at a very early stage of development, and return to the Pacific Ocean 12 to 15 months later. The number of crabs entering the Bay is probably a direct reflection of Delta outflow in that the more Bay waters that discharge to the ocean at Golden Gate the more strong are the ocean currents entering the bay. The heavier ocean waters scour the bottom of the bay, distributing the very small crabs and other marine-estuarine forms of life throughout the Bay system.

Prepared and submitted by the Bay Institute of San Francisco



# THE BAY INSTITUTE OF SAN FRANCISCO

*a public service research organization*

1/6

PA/DRA
Referred To <u>W-3</u>
REC'D
U.S. EPA
File: _____

'86 JAN -6 P12:20

January 3, 1986

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Judith E. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street  
San Francisco CA 94105

Dear Ms. Ayres:

This letter concerns two items, same subject:

1. Will there be a reply by your office to my letter of November 7?

I would like to report to my Board any pending actions of EPA you may be able to tell me about on this -- the ongoing collapse of the striped bass fishery and the potential role of EPA in enforcing federal-state standards expressed in the D 1485/Delta Plan of the State of California.

2. Please add the enclosed comments I have submitted to the State Board, in response to the State Board's draft Workplan for WQ 85-1, to my letter cited above.

This effort of the State Board to begin to monitor and develop standards for agricultural waste drains now discharging into the San Joaquin River is intimately tied to point #1 above, both in terms of physical, chemical and biological realities and the statutory applications of the Clean Water Act, in my opinion.

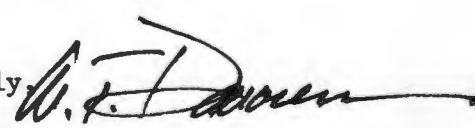
Your comments on either of the above would be greatly appreciated.

William T. Davoren,  
Executive Director

5080 Paradise Drive  
Tiburon, California  
94920

415/435-5922  
Cable: BAYSPEX

Sincerely,

  
William T. Davoren  
Executive Director

Comments upon

DRAFT WORKPLAN FOR THE WQ 85-1 TECHNICAL COMMITTEE  
of the State Water Resources Control Board  
provided by William T. Davoren

Executive Director  
Bay Institute of San Francisco  
December 19, 1985

The Context of Time

The Workplan is an important beginning recognition of a long standing problem -- the systematic degradation of the San Joaquin River. Although "comprehensive" studies of the discharges may not be productive for a few years (page 1-1), it is essential the State and Regional Board data be applied as quickly as possible to correcting the disastrous conditions now extirpating fish and wildlife values of long standing.

Recommendation: Data collected in this Workplan should be compatible, in terms of units of measurement and parameters of subjects studied, with the work performed since 1979 in applying the State Board's D1485/Delta Plan requirements. The new data should be instantly applicable and useable to the data base prepared for the D1485/Delta Plan hearings beginning in late 1986, and the data generated during the 1986-1988 hearing process. Especially should the hydrodynamic and chemical models and projections being developed (tardily) by the task forces organized under the State Board's Bay-Delta program applying D1485/Delta Plan findings be compatible with similar work now being proposed for the San Joaquin River.

Criticism: Except for one mention of the Bay-Delta program (page 4-7), and one reference to the salinity water quality objective at Vernalis (page 5-2), the Workplan fails to refer to the State Board's continuing effort (1976-1989) to develop and apply water flow and quality requirements to protect the

The Context of Time cont.

Delta, Suisun Marsh and San Francisco Bay. Completing all the discharge standards data collection and issuing waste discharge requirements "after April 1987" (page 1-8) is meaningless to the reader unless this portentous action is integrated with the action of the State Board on D1485/Delta Plan. More detail is required on this subject in the Introduction (page 1-1), and the Plan of Implementation (page 7-1).

The Context of Hydraulic Continuity

The operating realities of the lower San Joaquin River should be reflected in the Workplan's approach to measuring, monitoring and correcting the discharges to the river.

Recommendation: Operations of Friant Dam, and interannual variations, should be considered in evaluating base conditions of the San Joaquin River's ability to accept and transport agricultural waste discharges. Below the Workplan's area of immediate concern, apparently the "lower San Joaquin River from its confluence with the Merced River to Vernalis" (page 1-2), the effects of the operations of the State and Federal pumping plants should be considered in calculating or modeling available flows of the San Joaquin River and the seasonal and interannual variations of such effects. In addition to purely volumetric and hydrodynamic effects, the levels of constituents of concern, i.e. selenium, in the waters pumped by the State and Federal installations should be included in the data base being compiled to develop discharge standards for the San Joaquin River discharges. (The obvious recycling of constituents of concern continuously out of and back into the western San Joaquin Valley by the Central Valley Project pumps and the Delta-Mendota Canal must be considered not only in toxicological terms but in hydraulic, chemical, economic and biological terms as well.)

The Context of Hydraulic Continuity cont.

Finally, it is essential that the major water supply source to the western San Joaquin River, diversions of Sacramento River Valley water runoff to the western San Joaquin Valley by the facilities of the Federal Central Valley Project, be included in all hydraulic and chemical modeling work performed incident to implementing 85-1.

Criticism: The Workplan provides no assurance that the water supply side of the subsurface agricultural waste drain problem is to be considered. The obvious physical realities must be recognized by the Workplan, with consideration as necessary in Section 7.0, Plan of Implementation (Regulatory Approach) (page 7-1).

The Context of Riverine/Estuarine Biology

The connection between the unrelenting degradation of the San Joaquin River and the 20-year decline of the striped bass (*Morone saxatilis*) has been essentially ignored by the Federal and State biologists guiding river development projects. Even the Special Task Force appointed by the State Board, in its October 1983 report, totally ignored the San Joaquin River as a source of toxics affecting reproduction of the striped bass. This deficiency still plagues official technical papers, such as the one by Stevens, Kohlhorst, Miller and Kelley appearing in the Transactions of the American Fisheries Society in 1985\*.

Recommendation: The downstream effects of the constituents of concern, i.e. selenium, chromium, boron etc, in the agricultural waste discharges should be included in the biological, chemical and economic assessment and appraisal segments of the Workplan. This may require changes in the Scope of Work (page 1-2), Development of Water Quality Criteria (page 3-1), Economic Effects of the Proposed Action (page 6-1) and Plan of Implementation (page 7-1).

The Context of Riverine/Estuarine Biology cont.

Criticism: The Workplan neglects to consider the scale and the urgency of the disaster now impacting fish and wildlife resources of the Sacramento-San Joaquin system. The possible pivotal role of toxic constituents of subsurface agricultural waste flows in causing the unrelenting decline of such anadromous species as striped bass (*Morone saxatilis*), and the sustained low reproduction record of estuarine-marine species such as the Dungeness crab (*Cancer magister*), is effectively ignored in the Workplan. This void reflects a traditional bias imposed by, or imposed upon, the biologists employed by the State and Federal projects, or the biologists of the Department of Fish and Game or the U. S. Fish and Wildlife Service, who have long been associated with interagency planning in California that is related to water project development, operations or impacts. A few early reports on this association of agricultural waste flows with biological productivity of the Bay-Delta estuary are available. One, attached to this comment, has been produced by this Institute in association with the Sierra Club of California. \*\*

---

\* The Decline of Striped Bass in the Sacramento-San Joaquin Estuary, California, by D. E. Stevens, D. W. Kohlhorst, L. W. Miller and D. W. Kelley, op cit, 114:12-30, 1985.

\*\*Decline of Bay-Delta Fisheries and Increased Selenium Loading: Possible Correlation?, by Alvin J. Greenberg and Dianne Kopec, Bay Institute of San Francisco, Tiburon. 16 p. 1985.

The Context of Scientific Validity

The Workplan is an attempt to apply scientific, engineering and economic knowledge to a long neglected water management problem connected to many other problems. Historically, science applied in the narrow context of water development needs has been short-run,



The Context of Scientific Validity cont.

non-holistic and self-serving. Engineering applied has been what it normally is and is expected to be in all fields -- the quickest and shortest movement toward a given result. The economic analyses, traditionally, have keyed upon established dominant water use values and have not, either in scope or in methodology, attempted to give proper consideration to the realtime immediate effects or longterm toxicological results of such use.

Recommendation: The Workplan should include, and the Workplan managers should use, all available sources of scientific, engineering and economic expertise that is available and that becomes available during the course of the Workplan schedule. With the flowering of national attention on "the Kesterson Problem", there has been a proliferation of scientific data sources such as that available from the Committee on Irrigation-Induced Water Quality Problems of the National Academy of Sciences. The recent critique of the San Joaquin Valley Drainage Program's Plan of Study and Plan of Work by the Chairman of the Committee (W. H. Allaway), should be closely reviewed for insight to traditional western interagency scientific failures in dealing with such problems as toxicology and systemic effects of drainage water disposal, as well as the economic and social effects of such disposal.

Criticism: The Workplan's horizons should <sup>be expanded to</sup> include downstream economic, hydraulic, chemical and biological effects of subsurface agricultural waste discharges in the western San Joaquin Valley, and should consider distant effects potentially caused by these discharges to water service areas of the State Water Project in Kern County, Los Angeles and San Diego Counties. The sources of information used in preparing the Workplan, as reflected in the limited number of entries shown in Appendix A -- References, have been too restricted. No mention is made of recent toxicological work by Saiki and Ohlendorf, of the U. S. Fish and Wildlife Service, for example, and of dated but valuable material, such as the 1967 report on the San Joaquin Master Drain produced by the Federal Water Pollution Control Administration (now EPA).

# # #

# The Bay Institute

OF SAN FRANCISCO

a public service research organization

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Executive Director

Schoonmaker Point #120  
Sausalito, CA 94965

415/331-2303

Judith Ayres  
EPA Regional Administrator  
215 Fremont  
San Francisco, CA 94105

Dear Ms. Ayres:

For those of us who have been preparing from 1979 to 1987 for the Bay-Delta hearings, obviously the best time to clear up gaps and ambiguities in the record is now. This is important to be sure the State Board's Bay-Delta hearings, opening formally on July 7, enjoy optimal conditions for success.

The hearings will begin clumsily, from a hydrologic data perspective, due to the failure of the Department of Water Resources and the Bureau of Reclamation to complete and provide the results of the hydrodynamics work ordered by the Board in 1978. This is the most flagrant failure of the responsible agencies. The Bureau of Reclamation's refusal to participate in or to accept the Board's jurisdiction -- until May of 1985 when the two permittee agencies first floated the Coordinated Operations Agreement -- implies that the Bureau should bear the major blame for the failure to produce the hydrodynamics information ordered by the Board to be available in 1986. But the Board's inability or reluctance to enforce the terms of its own Order on the Bureau of Reclamation and the Department of Water Resources cannot escape notice.

This same pattern of "incompletes" by the responsible public agencies -- namely, the permittee agencies (State Department of Water Resources and the U.S. Bureau of Reclamation) and the regulatory agencies (the State Board and the Environmental Protection Agency) -- includes the absence of your agency's comments on the 1984 Triennial Review of the State Board's 1978 Order and Plan.

*This should be  
controlled  
to Watts*

5/19 To-W-3  
RA/DRA

Referred To *W-1*

CC: *RA, W-1, RAC*

File: \_\_\_\_\_

May 15, 1987

EPA's comments on the original Order and Plan, EPA's comments on the Board's Triennial Review of 1981, and EPA's comments on the Board's Triennial Review of 1984 form essential documentation for the hearings that begin July 7. Clear linkage with the earlier decisions on standards is essential. EPA should clear up this faulty record.

The Bay Institute and the fisheries organizations it works with participated in the Triennial Review proceedings of 1981 and 1984. We observed both times that the Striped Bass Index had collapsed. We questioned both times whether the Board could maintain that the fisheries protection standards of the 1978 Delta Plan and Order were effective.

The fisheries have declined steadily since. Now some fisheries groups in desperation are even seeking application of federal and state Endangered Species Act protections for these resources.

The commendable earlier record of EPA on fisheries' protection standards of the original "Delta Plan" is now compromised. I refer to the original caveats and understandings that EPA applied before it granted approval to the 1978 Order and Plan. These clarified application and limits of the Striped Bass Index, for example. EPA's comments on the 1981 Triennial Review renewed those sensible conditions.

The purpose of this letter is to request that EPA prepare and release its long-awaited comments upon the State Board's 1984 Triennial Review of the 1978 "Delta Plan" as soon as possible.

I realize that EPA comments released now, at this relatively late date, will result in some political reaction, making your agency's position uncomfortable for a brief time. However, the brief embarrassment is preferable to EPA not having its procedural house in order as the hearings grind on for four more years.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. T. DAVOREN", with a long, sweeping horizontal line extending to the right.

WILLIAM T. DAVOREN  
Executive Director

WTD:cvp



# The Bay Institute OF SAN FRANCISCO

*a public service research organization*

May 15, 1987

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W. Don Maughan  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95801

Judith E. Ayres  
Environmental Protection Agency  
215 Fremont St. 5th Floor  
San Francisco, CA 94105

Dear Don and Judith:

As the principal officials of the two regulatory agencies responsible for the historic Bay-Delta hearings beginning July 7, I know you must be concerned about the terminology applied by each of your agencies in communications about the hearings.

For example, I note that the State Board's key "Notice of Public Hearing, Phase I of the Bay-Delta Estuary Hearing, The dates, times, topics etc..." states the purpose of the pending hearings quite inadequately to

"... allow for the renewal of existing water quality objectives." (Attachment B, page 1, Summary of Record, emphasis added.)

For comparison, an EPA memorandum related to the technical infrastructure of the Bay-Delta hearing proceedings (Mike Monroe, May 5, 1987) states that

"... The proceedings will review, broaden, and refine the water quality standards of the Bay-Delta estuary..." (emphasis added).

No participant in these complex hearings expects semantic uniformity in all documents associated with the hearings. However, the two controlling agencies should be particularly careful, in my opinion, to apply exact terminology in all communications that must state, or restate, the purposes, goals and objectives of the hearings.

William T. Davoren  
Executive Director

Schoonmaker Point #120  
Sausalito, CA 94965

415/331-2303

Yours truly,



WILLIAM T. DAVOREN  
Executive Director

WTD:cvp

**The Bay Institute**  
**OF SAN FRANCISCO**  
*a public service research organization*

T6- W-3

5/27/87

<del>EPA/DRA</del>
Referred To <u>W-1</u>
CC: <u>PAC</u>
File: _____

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May 21, 1987

Ms. Judith A. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street 5th Floor  
San Francisco, Ca 94105

Dear Ms. Ayres:

Enclosed please find my letter to you dated November 7, 1985.

This letter contains specific conditions referred to in my letter to you of May 15, 1987, regarding the decline of the striped bass fisheries, the failure of the State Board Delta Plan, and the need to make public EPA's comments on the Triennial Review of 1984.

Yours truly,



WILLIAM T. DAVOREN  
Executive Director

WTD:cvp  
enclosure

William T. Davoren  
Executive Director

Schoonmaker Point #120  
Sausalito, CA 94965

415/331-2303



# THE BAY INSTITUTE OF SAN FRANCISCO

*a public service research organization*

November 7, 1985

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Ms. Judith E. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street 5th Floor  
San Francisco CA 94105

Dear Ms. Ayres:

The Board of Directors of the Bay Institute discussed the distressing decline of the young-of-the-year striped bass (*Morone saxatilis*) populations during its October 26 meeting. The Board directed me to write this letter to you.

Aside from its importance as a symbol of a healthy, self-renewing aquatic environment for a century, the striped bass of the Bay-Delta system represents weighty legal, financial, political, water flow and ecological commitments made by public officials and agencies during the past 50 years.

With its predecessor health agencies, EPA has had only a peripheral role in the public agency decisions of the past. This must change, and the opportunity to make this change is now at hand.

Ever since the passage of the Clean Water Act and its counterpart state legislation, Porter-Cologne, EPA and the State Water Resources Control Board have provided a regulatory system designed to assure protection of the quality of California's public waters. The first major effort in California to protect a water system's permanent viability under Porter-Cologne is the D 1485/Delta Plan\* action of the State Board.

The D 1485/Delta Plan affects only the two major public water development agencies in California: the federal Bureau of Reclamation and its Central Valley Project, and the Department of Water Resources' State Water Project. Between them these two water projects control streamflows, diversions, exports, and generate agricultural drainage wastes, that control the fate of the Bay-Delta estuarine system generally and the survival of the striped bass populations specifically.

The State Board's approach combining water quantity and water quality standards for the Delta and Suisun Marsh is an approved Federal-State water quality standards plan under Section 303(c) of the Clean Water Act.

\* Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh, 1978.

William T. Davoren,  
Executive Director

5080 Paradise Drive  
Tiburon, California  
94920

415/435-5922  
Cable: BAYSPEX

When the Regional Administrator approved the 1978 D 1485/Delta Plan,<sup>1/</sup> certain interpretations of the document were stipulated. The EPA regarded the premise of the State Board's levels for the fish spawning and some of the salinity control parameters on the historic calculations of the Striped Bass Index as an integral part of the approved water quantity/quality control effort. EPA was particularly specific regarding the Plan's dependence upon established practices and available data keying the plan's controls to "without project" conditions.

In short, the goal of the D 1485/Delta Plan was a Striped Bass Index of 79.

The following excerpts from EPA's official letter of acceptance of the D 1485/Delta Plan make no mistake about this reliance on the historic striped bass research work of the federal and state agencies responsible for mitigating effects of the projects on the aquatic environment:

2. If it is shown that there is a measurable adverse effect on striped bass spawning\*, then a complete review of the Striped Bass Spawning Relaxation Provision (at the Antioch Waterworks Intake when project deficiencies are imposed)(Table VI-1, page VI-31) shall commence immediately. Similarly, if any change in Suisun Marsh Chipps Island standards is proposed, as part of that standard amendment process, a review and revision of the Relaxation Provision shall commence.

3. If there is a measurable decrease\*\* in the Striped Bass Index (SBI) below that predicted, the SWRCB shall commence immediate actions to review and revise the Delta Plan standards such that "without project" levels of protection are attained. It is our understanding that an average SBI of 79 represents "without project" protection.

---

\* "A measurable adverse effect on striped bass spawning" means the following: the Striped Bass Index (SBI) for the individual year is decreased by more than 3 standard deviations from that which would otherwise be predicted using the relationships shown on Figures III-27 and III-28 of the Final EIR for Delta Plan adopted August, 1978.

\*\* Measurable decrease means either:

(1) three consecutive years where the SBI is decreased by more than one standard deviation below that which would otherwise be predicted for each year using the relationships shown in Figures III-27 and III-28 of the Final EIR of the Delta Plan adopted August, 1978; or

(2) six consecutive years where the SBI is below that predicted for each year, using the above relationships.

Ms. Ayres, under either of the above 1980 caveats the D 1485/Delta Plan has failed to meet your agency's requirements. The Striped Bass Index, observed, since 1977 has posted the following annual levels:

1977	9.6	units	1980	14.0	units	1983	15.4	units
1978	29.6		1981	29.1		1984	26.3	
1979	16.9		1982	15.4		1985	6.3	

Since 1976, the gap between the predicted and the observed (actual) SBI has been a continuing mystery to the biologists and engineers responsible for developing the SBI and for calculating its annual levels. Although the failure of the striped bass fishery is a tragedy that may have been avoided, the double tragedy is that the entire system of water quantity/quality governance in California is based upon such weak and vulnerable "scientific" criteria. Please note attachments A, B, C.

Clearly, just as war or peace cannot be a decision made by generals, admirals and commanders, regulation of the Bay-Delta system can no longer be left to the discretion of cabinet secretaries and directors of the two major public water projects in California.

We realize that EPA's role in saving the striped bass, and probably other species that less is known about than the striped bass, is limited in matters dealing with state water rights determinations and in requiring discharge permits for agricultural waste discharges.

However, there should be no hesitancy on the part of EPA to act decisively in matters dealing with toxicants entering the Bay-Delta system. The D 1485/Delta Plan does not consider toxics sources, even though the exported waters of one of the major projects controlled by D 1485/Delta Plan -- the Central Valley Project -- has been shown to be a serious unregulated and unmonitored source of systemic pollution of the San Joaquin River, and hence the Delta and the Bay.

The Bay Institute has issued one report on this subject\*, and is continuing to document the systemic toxic threats to the Bay-Delta system.

With the Bay-Delta striped bass on the verge of extinction, there should be no further delay by EPA in applying whatever authority it can muster to assist, or require, the State Water Resources Control Board to force the two public project agencies to take actions favorable to helping the striped bass maintain natural reproduction.

In addition to EPA's organic authority in matters of controlling toxics entering the waters of the United States, please be aware that one of the basic thrusts of the Clean Water Act in the beginning -- and presumably today as well -- was to protect and preserve the nation's fisheries.

---

\* Decline of Bay-Delta Fisheries and Increased Selenium Loading: Possible Correlation?, by Alvin J. Greenberg and Dianne Kopec, published jointly by the Bay Institute of San Francisco and the Sierra Club of California (1985).

In view of the above, and realizing that an opportunity for emergency action now exists in the form of the formal review by you and your staff of the State Board's Triennial Review of D 1485/Delta Plan, we request that you take the following actions:

1. Do not approve the State Board's Triennial Review (1984) compliance, now pending.

Due to the failure of the Striped Bass Index, and the collapse of the striped bass fishery implied, request the State Board to begin hearings in early 1986 on either (1) the scoping of the D 1485/Delta Plan hearings, now scheduled for November 1986, or (2) emergency hearings on the question of the connection between the decline of the striped bass populations and toxics entering the Bay-Delta system from all sources, or both simultaneously.

2. Advise the State Board that, in view of the emergency facing the YOY\*striped bass populations this year and next year, a review of the Striped Bass Spawning Relaxation Provision should begin immediately, and in the event the 1986 water year is below normal the use of the Striped Bass Spawning Relaxation Provision should be withdrawn from the two project operating agencies.  
(\* young-of-the-year)

3. Require the State Board's Delta Plan, under the authority of Section 303(c) of the Clean Water Act, to include management of systemic toxins which are not or cannot be controlled through the discharge permit programs or Basin Plans of the Regional Boards.

As the State Board demonstrated earlier this year, in the matter of Kesterson Reservoir pollution caused by the San Luis Drain, Regional Boards are not able at this time to control toxic substances entering the state's public waters from agricultural sources. The many and diffuse sources of wastes similar in constituents to the San Luis Drain wastes, we now know, have been entering the San Joaquin River from 103,000 acres of lands served primarily by the Bureau of Reclamation in the western San Joaquin Valley (Delta-Mendota Project service area). Some of these "tile drain" wastes have been disposed of directly or indirectly into the San Joaquin River for 30 years.

Sincerely yours,



William T. Davoren  
Executive Director

w/Attachments A, B, C

cc: TBI Directors only



# The Bay Institute

OF SAN FRANCISCO

*a public service research organization*

July 2, 1987

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Judith E. Ayres  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street  
San Francisco, CA 94105

Re: Delayed Review of State's 1978 Delta  
Plan

Dear Ms. Ayres:

We are heartened by your action this week withholding approval of the fisheries standards contained in the State's water quality control plan (1978) for the Delta and Suisun Marsh.

Our letter of November 7, 1985 to you on this subject is evidence of our long-time concern about the failure of the Plan, especially in its dependence upon the Striped Bass Index, to protect striped bass and other fisheries.

Congratulations on seeing your duty, Ms. Ayres, and doing it.

Another failure of the State's standards has become evident in the past two years. This is the failure of the State's Plan and Order (D1485) to protect the fish and wildlife resources of Suisun Marsh. Not only have the standards failed or not been met, but also the Board has taken steps to postpone or relieve the obligation of the permittees to protect the Marsh habitat.

The Plan's original requirement for the permittees (State Department of Water Resources and the Bureau of Reclamation) to meet the Marsh's needs by Delta outflow, if corrective works or actions were not taken by October 1984, was the first 1978 Plan requirement to be set aside by the Board. Now we see the marsh standards in more serious jeopardy. The Williams' report documents the new failure.

William T. Davoren  
Executive Director

Schoonmaker Point #120  
Sausalito, CA 94965

415/331-2303

This is described in the BCDC staff memo of June 19, 1987, that conveys the Philip A. Williams and Associates' report to BCDC Commissioners for discussion at BCDC's meeting on July 2, as follows:

"The State Department of Water Resources (DWR) protection facilities for the Marsh, which are intended to modify circulation in the Marsh so that the D-1485 standards could be met without increasing Delta outflow significantly, have not been completed and may not be fully built until 1997. Even when they are constructed, they may not adequately protect both managed and tidal wetlands in the Marsh.

"In 1985, the D-1485 standards were not met. In December of 1985, the State Board relaxed the standards in D-1485, thereby reducing, or perhaps eliminating, protection for up to 4,000 acres of managed wetlands and 1,000 acres of tidal brackish water marsh. And, the State Board delayed enforcement of the 1978 D-1485 standards until 1997.

"The delay in implementing the original D-1485 standards, the inability of the adopted standards to protect all of the tidal brackish marshes in the Marsh and in Suisun Bay, and future water diversions will all increase salinities in the Marsh, which adversely affects waterfowl and endangered species habitats. Finally, the mitigation package formulated by DWR and the State Board has not been carried out and, even if carried out, would not fully offset the loss of tidal brackish water marsh within the Suisun Marsh."

Consultant Williams recommends that the original D-1485 (Delta Plan) salinity standards be reinstated immediately to protect the Marsh, and that new ones be adopted to protect the tidal brackish water marshes around Suisun Bay.

Ms. Ayres, the State's 1978 Plan for the Delta and Suisun Marsh (D 1485) have failed to provide protections for wildlife of the marsh as they failed to protect fisheries of the Bay-Delta estuary. We appreciate your action withholding approval of the existing fisheries standards and request that you consider similar action on the Plan's failed standards for Suisun Marsh.

Yours truly,



WILLIAM T. DAVOREN  
Executive Director

WTD:cvp



SUNNE WRIGHT McPEAK  
Supervisor, District Four

2301 Stanwell Drive  
Concord, California 94520

(415) 687 - 8663

Contra  
Costa  
County



Board of Supervisors

7/20

DA DRA
Referred To <u>W-1</u>
CC: <u>W-3</u>
File: _____

July 15, 1987

Ms. Judith E. Ayers  
Regional Administrator  
Environmental Protection Agency  
215 Fremont Street  
San Francisco, CA 94105

Dear Judith:

I understand you called while I was away at a family reunion. I am sorry we did not have an opportunity to talk directly.

I do, however, want to thank you for the EPA stand against further increases in exports out of the Bay-Delta estuary until better protections are in place. This has been a long standing position of the Committee for Water Policy Consensus and the Contra Costa County Board of Supervisors. Congratulations on a very important, courageous stand.

Your continued involvement and the work of the EPA on the Bay-Delta Estuary Study will be critical elements of the State Water Resources Control Board hearings over the next few years. I look forward to continuing to work together.

Sincerely,

Sunne Wright McPeak

SWM:lel



*CA Birch* *Elkhart*

ADMINISTRATION BUILDING  
SUITE 315, CIVIC CENTER  
SAN RAFAEL, CALIFORNIA 94903  
TELEPHONE (415) 499-7331

# THE BOARD OF SUPERVISORS OF MARIN COUNTY

July 9, 1987

*Buy better*  
*Clint*

7/23

RA/DRA	_____
Referred To	<u>W-1</u>
CC:	<u>ORA</u>
File:	_____

Judith Ayres  
Regional administrator, Region IX  
U.S. Environmental Protection Agency  
215 Tremont Street  
San Francisco, CA 94105

Dear Ms. Ayres:

At its meetings of June 16 and July 7, 1987, the Marin County Board of Supervisors voted unanimously to oppose both Assemblyman Costa's (AB 1710) and Senator Ayala's bill (SB 32) calling for more water delivery to the Central Valley and Southern California. The Board did so because of its concern for the water quality of the Delta and San Francisco Bay.

The Board also voted unanimously to support your position as described in the July 2, 1987, San Francisco Chronicle article. Apparently, EPA has the right to file a formal petition disapproving the State's standards under the Clean Water Act. While you have not decided to proceed with the petition at this time, we would urge you to do so if there is any indication that there is further degradation in Bay/Delta water quality.

We would also like to thank you for your continuing efforts to protect the environment.

Sincerely,

HAROLD C. BROWN, JR.  
Chairman

BOB ROUMIGUIERE  
San Rafael  
1st District

Chairman  
HAROLD C. BROWN JR.  
San Anselmo  
2nd District

Vice Chairman  
AL ARAMBURU  
Tiburon  
3rd District

GARY GIACOMINI  
San Geronimo  
4th District

BOB STOCKWELL  
Novato  
5th District

Clerk  
MARGARET F. COUNCIL  
Regular Meeting  
Tuesday, 9A.M.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

(In reply respond to: W-3)

21 OCT 1987

Mr. Barry Nelson  
Executive Director  
Save San Francisco Bay Association  
2140 Shattuck Avenue  
Berkeley, CA 94704

Dear Mr. Nelson:

As you requested, I am sending you two recent letters EPA wrote concerning the Delta Water Quality Control Plan (Delta Plan). Enclosed are:

1. Letter from Judith E. Ayres (EPA) to W. Don Maughan (State Water Resources Control Board), regarding the Second Triennial review of the Delta Plan; and
2. Letter from Harry Seraydarian (EPA) to William Travis (San Francisco Bay Conservation and Development Commission), regarding water quality standards for Suisun Marsh.

If you have any questions pertaining to these letters, or would like additional information, please contact me at 415/974-8285.

Sincerely,

Catherine Kuhlman  
Chief, California Section  
Water Quality Planning and  
Standards Branch  
Water Management Division

Enclosures (2)

cc: W-1 - Reading File  
W-3 - Reading File  
W-3 - Official File

W-3 - D. Eberhardt, Larry, 10/19/87

CONCURRENCES							
SYMBOL	W-3						
SURNAME	Eberhardt						
DATE	21 OCT 87						



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street  
San Francisco, Ca. 94105

29 JUL 1986

Mr. James L. Easton  
Executive Director  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, California 95801

Dear Mr. Easton:

In follow-up to the remarks I made at the State Board's 16 June 1986 preconference hearing, EPA would like to offer further comments in response to the State Board's "Notification of and Request for Response Regarding the 1986 Proceedings of the State Water Resources Control Board on the San Francisco Bay/Sacramento-San Joaquin Delta Estuary."

As stated in the Notification, the primary objectives of the 1986 hearing process are to review and refine as necessary the existing water quality standards for the Bay-Delta Estuary and Suisun Marsh. As such, EPA supports the revised hearing process as indicated by the timeline attached to the notice for prehearing conference #6. This timeline indicates that the water quality standards review and water rights processes will be conducted separately. As a further refinement upon this concept, the State Board should consider that the water quality standards review process be conducted by the Board's Division of Water Quality. Having the water quality activities conducted by an organizational unit separate from that which will be making recommendations concerning water rights will assure the public that water quality determinations are made on their own merits.

We are also encouraged by the consideration being given to the inclusion in the Delta Plan review of pollutant-related impacts on beneficial uses with those concerning flow and salinity. As stated in a 23 June 1986 letter from Raymond Walsh to the EPA Regional Administrator, existing water quality standards are not adequate to protect the striped bass fishery. As there is evidence that toxic pollutants may be playing a significant role in the continuing decline of the striped bass, it is appropriate for, and indeed incumbent upon the State Board, in cooperation with the Central Valley and San Francisco Bay Regional Water Quality Control Boards, to consider these and other non-salinity related impacts upon the striped bass and other designated beneficial uses in the review of the water quality standards for the Bay/Delta Estuary and Suisun Marsh.

Whether this is done under a single water quality control plan or simultaneously in the Delta Plan and in the Basin Plans for Regional Boards 2 and 5 is a matter for the State to decide.

We look forward to receiving the revised workplan for the conduct of the Delta Plan hearing process. We would appreciate being provided with the opportunity to review this workplan before it is formally adopted so that we may ensure that the proposed process is consistent with Federal water quality standards regulations and will lead to an approvable revised Delta Plan.

We look forward to continuing to work with the State Board during the course of the upcoming triennial review process towards a set of water quality standards that are truly protective of all the beneficial uses of the estuary. If you have any questions, please feel free to give me a call or your staff may call Catherine Kuhlman or Jeremy Johnstone of my staff at (415) 974-8285 or (415) 974-8174, respectively.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dane" or "Jones", with a long horizontal stroke extending to the left.

David B. Jones  
Chief, California Branch

cc: William Crooks, CVRWQCB  
Roger James, SFBRWQCB

## STATE WATER RESOURCES CONTROL BOARD

PAUL R. BONDERSON BUILDING  
901 P STREET  
P.O. BOX 100  
SACRAMENTO, CALIFORNIA 95801

(916) 445-1553



SEP 9 1986

David B. Jones, Chief  
California Branch  
United States Environmental Protection  
Agency, Region IX  
215 Fremont Street  
San Francisco, CA 94105

Dear Mr. Jones:

RESPONSE TO YOUR LETTER DATED JULY 29, 1986 COMMENTING ON THE  
PROCEEDINGS ON THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN DELTA  
ESTUARY HEARING PROCESS

Thank you for your letter commenting on the State Board's hearing process for the Bay-Delta estuary. The Board members are pleased to note that the Environmental Protection Agency (EPA) supports the revised hearing process, including the general time schedule and sequence of events illustrated in the schematic attached to the prehearing conference No. 6 notice. As indicated in that schematic, it is the Board's intention to separately conduct the water quality standards review and appropriate water right review.

With regard to the appropriate unit or units to conduct the hearing, the Board has decided the Division of Water Rights is best suited to carry out this function. Division of Water Right staff have been working on Bay-Delta issues over the past several years in anticipation of and preparation for the forthcoming Bay-Delta hearing. The technical expertise required to conduct a beneficial use assessment related to flow and salinity resides within the Water Rights staff. The hearing process is being coordinated with the San Francisco and Central Valley Regional Water Quality Control Boards. Regional Board staff will lend their expertise during the hearing to assist differentiating flow and salinity induced impacts on beneficial uses from those caused by other toxic pollutants. Such information should subsequently be used by the Regional Boards to amend basin plans.

As presently scheduled, the revised workplan for the Bay-Delta hearing process should be adopted by the Board in December. In accordance with your suggestion, a draft copy will be sent to you for review before it is finalized and adopted by the Board. That draft should be available in November.

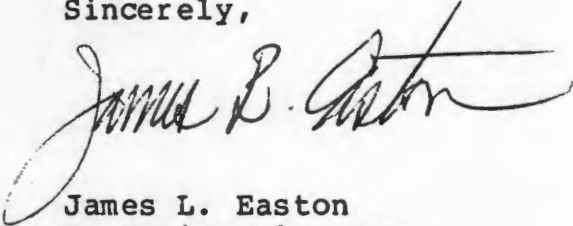


David B. Jones, Chief

-2-

Your comments on the forthcoming hearing are appreciated. The Board intends to continue working closely with EPA during the entire process. If you have any questions at all on the process or on the development of the workplan, please call Mr. David Beringer, Program Manager for the Bay-Delta Program at (916) 322-9870.

Sincerely,

A handwritten signature in cursive script, appearing to read "James L. Easton".

James L. Easton  
Executive Director

cc: William Crooks, CVRWQCB  
Roger James, SFBRWQCB  
Board Members

OCTOBER 31, 1984

Mr. James L. Easton  
 Executive Director  
 State Water Resources Control Board  
 P.O. Box 100  
 Sacramento, California 95810

Dear Mr. Easton:

This is in response to the revised timeline for the Bay-Delta hearing process that details the participation of the Central Valley and San Francisco Bay Basin Regional Boards.

Our specific comments are enclosed, but in general we are pleased that such attention is being paid to the subject of the Regional Boards' participation in the process. EPA's involvement at this early stage should facilitate the development of an approvable set of water quality standards for the estuary.

As our comments note, we believe that the success or failure of the attempts to integrate the Regional Boards' pollutant-related standards and the State Board's salinity standards will hinge upon the nature of the pollutant policy document and at what stage in the process it is developed. This document should be of sufficient detail to guide the Regional Boards in establishing numerical criteria and should reconcile any differences in the Region 2 and Region 5 Basin Plans.

In addition, it should be clearly indicated on the timeline and in the workplan for the conduct of the hearings process exactly where the water quality planning process begins and where it ends. Revised salinity and pollutant standards must be adopted simultaneously by the State Board so that EPA receives, for our review and approval, a complete set of water quality standards for the Delta. We have enclosed a copy of how we interpret our comments impact upon the State Board's draft schematic detailing the hearings process.

CONCURRENCES							
SYMBOL	W-3-3		W-3				
SURNAME	Johnstone		John				
DATE	10/31/86		1/31/86				

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion, and the number of people aged 65 and over is expected to increase from 0.2 billion to 0.5 billion (United Nations, 1994).

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthal and Whistler (1973).

If the development of criteria for such factors as toxics are to remain the responsibility of the Federal boards, then it appears logical that they bear such development concurrently with the same part of the State Board's Water Quality Control Plan for five are reliable and that, as we have suggested above, the State Board consider all of these together at the same time. This would ensure that criteria sufficient for the protection of health at uses are adopted and would permit our review of the water quality standards for the Delta.

U.S. EPA, REGION 9

COMMENTS ON THE

"REVIEW OF THE STATE AND REGIONAL BOARD  
ACTIVITIES IN THE BAY-DELTA HEARING PROCESS"

Comment #1 - The Water Quality Standards Submitted to EPA for  
Approval Must Contain Sufficient Criteria to  
Protect Beneficial Uses

In recognition that other factors besides flow and salinity may be affecting the beneficial uses of the estuary, the State Board is soliciting the participation of the Regional Boards in the Bay-Delta hearing process. EPA wishes to make it clear that the proposed timeline is not acceptable from a Federal water quality standards perspective. The State Board must adopt a plan for the control of salinity and flows concurrent with approving water quality standards for other constituents adopted by the Regional Boards for their respective basins. Federal regulations require that the water quality standards include sufficient criteria to protect the beneficial uses (40-CFR parts 131.6, 131.11). Therefore, when the water quality standards package is sent to EPA for approval, we expect to receive a standards submittal that includes criteria for these other factors as well as for flow and salinity. To accomplish this requirement, the State and Regional Boards will to adopt water quality standards for salinity and pollutants in a simultaneous timeframe.

Comment #1 - The State Board Should Provide Resources to the Regional Boards Early in the Hearing Process.

Comment #2 - The State Board Should Develop Pollutant Guidance Document in a Timely Manner to Allow the Regional Boards to Take Action Concurrent with the State Board's Development of a Flow and Salinity Control Plan

Besides the State Board, the Regional Boards are to be active participants, they will need resources to permit this. Providing these resources early. If the development of criteria for such factors as toxics are to remain the responsibility of the Regional Boards, then how it appears logical that they begin such development concurrently with the development of the State Board's Water Quality Control Plan for flow and salinity and that, as we have suggested above, the State Board consider all of these together at the same time. This would ensure that criteria sufficient for the protection of beneficial uses are adopted and would facilitate our review of the water quality standards for the Delta.

As for how these Federal requirements would affect the proposed timeline, it would appear that any Regional Board adopted actions should come to the State Board for hearing concurrently with the Phase II hearing on the draft flow and salinity control plan. This would permit, if appropriate, the adoption of a suite of criteria at the same time (point #6 on the proposed time line). This would then, of course, require the development of the "pollutant policy document" in advance of that time. It appears to us that this policy document should be prepared in advance of the preparation of the flow and salinity control plan and not at the same time as presently proposed. If the policy document were to be prepared immediately at the end of the Phase I hearing, this would permit the Regional Boards to develop specific criteria at the same time that the State Board is developing the flow and salinity control plan, and both sets could be considered during the Phase II hearing.

Comment #3 - The Pollutant Guidance Document Should Be Specific in Nature

Rather than being simply a policy document EPA believes that the pollutant guidance document to come out of the Phase I hearings should offer specific guidance to the Regional Boards. This guidance should include the constituents of concern, recommended bounds for criteria levels, and explicit guidance on how the State Board will resolve conflicting criteria as may be proposed by the two Regional Boards vis-a-vis the existing beneficial uses of the waters of the two basins as contained in the respective Basin Plans.

Comment #4 - The State Board Should Provide Resources to the Regional Boards Early in the Triennial Review Process

Besides participating in the Bay-Delta hearings process, the Regional Boards have other ongoing planning activities. If the Regional Boards are to be active participants, they will need resources to permit this. Providing these resources early in the process will demonstrate to the public that the State Board is sincere in its attempts to conduct comprehensive (flow, salinity, and toxics) planning for the estuary.



Comment #5 - There Should Be A Distinct Endpoint Indicating  
The Completion Of The Water Quality Planning  
Process

The water quality planning and the water rights decision processes should remain separate. Therefore there should be a distinct endpoint that would signal the completion of the water quality planning process for both salinity and pollutants. This endpoint should be clear to everyone and should be indicated on the schematic of the Bay-Delta hearing process.

EPA interprets this point to be that time when the State and Regional Boards have reviewed the existing controls and, if appropriate, adopted additional water quality standards for the protection of the beneficial uses of the estuary, and EPA has approved those standards. This would constitute the point of completion of the triennial review of the Delta standards. On the draft schematic of the process this would be at point #8.

Comment #6 - EPA Has Attached a Copy of Our Interpretation of  
How Our Comments Would Impact The Schematic for  
the Hearings Process.

Attachment

**STATE WATER RESOURCES CONTROL BOARD**

PAUL R. BONDERSON BUILDING  
901 P STREET  
P.O. BOX 100  
SACRAMENTO, CALIFORNIA 95801  
(916) 445-1553



November 25, 1986

Mr. David B. Jones  
Chief, California Branch  
Water Management Division  
United States Environmental  
Protection Agency, Region 9  
215 Fremont Street  
San Francisco, CA 94105

Dear Mr. Jones:

**REGIONAL BOARD PARTICIPATION IN THE BAY-DELTA HEARING PROCESS**

This is in response to your October 31, 1986 comments regarding the draft timeline which shows the participation of Regional Boards 2 and 5 in the Bay-Delta hearing process and their coordination of their actions with the hearing process.

We appreciate your comments regarding the draft timeline. Responses to your specific comments are listed below. The timeline has been revised to address comments we received. We believe that those revisions and the clarifications set forth below address the questions you have raised.

**The Continuing Planning Process**

You commented that there should be a distinct endpoint to the water quality planning process before the water rights decision is adopted. We believe that no endpoint can be established. The Clean Water Act specifically requires each state to have a continuing planning process for control of water quality. Clean Water Act §303(e). Also, the Act requires each state to review each water quality control plan at least every three years. Clean Water Act §303(c). Likewise, the California Water Code at §13240 requires that the plans be periodically reviewed. Because of these provisions, no endpoint ever can exist in the process of planning for water quality control. Rather, plans regularly are reviewed and amended if appropriate. If inadequate information is available, a regional board or the State Board will order or contract for studies so that in the future needed amendments can be made. We anticipate that such a situation is highly likely in this case.

Because of the necessary continuum of water quality planning, we have not contemplated a distinct end to planning before we conduct a water right hearing to consider the responsibilities of upstream water users to maintain beneficial uses in the Delta. Rather, we expect that after the Board adopts a water right decision the regional boards may wish to make further adjustments in their plans at their next triennial review.

#### State Board's Control of Flow and Salinity

You have suggested that the State Board delay its adoption of its water quality control plan for salinity control until it approves amendments to the basin plans of Regional Boards 2 and 5 for their respective parts of the Bay-Delta Estuary. It appears that such a delay would be unproductive and would delay the Board's overall process, including the implementation of a practical solution to flow-controlled salinity problems in the Estuary. Based on past experience and on statutory provisions, it is unnecessary under the Clean Water Act to amend all water quality objectives within separate plans simultaneously. However, we agree that it will be advantageous to have the most current information possible under all three plans when we undertake the water allocation process; it is our intention to do so.

The State Board has decided to consider adopting a new or revised water quality control plan to address the effects of salinity levels in the Bay-Delta Estuary. The plan may also specify flows that will be needed to maintain the required salinity levels. While it is permissible for a state to adopt a water quality control plan to deal with salinity from seawater intrusion, the Clean Water Act does not require enforcement of such standards. Thus, the Act avoids interfering with state control of the allocation of water. It appears that your suggestion to finalize all of the plans simultaneously and without contemplating continuing planning would be useful only if it were expected that pollutants in the Estuary would be controlled primarily by the flow of water. To control pollutants by dilution when discharge controls were available would raise state constitutional law questions regarding the waste or unreasonable use of water.

Although the State Board intends to employ both a salinity control plan and a water right decision in its effort to protect the Estuary, it theoretically could control the salinity of the Bay-Delta Estuary solely through its water right authority. To do so, it would simply determine the extent of the rights of upstream users of water relative to the rights of water users in the Estuary and the responsibilities of the upstream users to maintain instream beneficial uses of water. The State Board expects to decide the responsibilities of upstream users in the water right part of its proceeding on the Bay-Delta Estuary.



However, the State Board recognizes the value of adopting a water quality control plan for salinity, and plans to consider amending or replacing its current plan for the Delta and Suisun Marsh as part of its proceeding. This will ensure that objectives exist for full protection of beneficial uses in the Estuary with regard to salinity. The plan also will provide a framework for considering any implementation measures for water quality protection that may not be implemented through control of water rights.

The State Board's existing objectives for control of ocean salinity constitute just one part of California's existing group of water quality standards for the Bay-Delta Estuary. Parts of the group have changed from time to time, and will continue to change. The State Board's plan for salinity control, since it is implemented by means other than point source controls, stands apart from the plans of Regions 2 and 5, and is not interdependent on the regional plans. Thus, its objectives can be changed without affecting the other plans, and there is no reason to delay the development of salinity objectives to wait for the regional boards to amend their plans. With regard to flows for other purposes, the State Board believes that the regional boards should exhaust all available source control means to achieve objectives before the State Board considers requiring the release of allocated water to meet dilution or flushing flow needs.

Further, it is important for the State Board to move its process along quickly toward implementation. The water rights process through which a salinity plan can be implemented will be lengthy and complex. Thus, unnecessary delays in adopting a salinity plan will lengthen the process while leaving the Estuary protected from adverse effects of salinity at levels which may be very different from the levels required by the new objectives.

#### Pollutant Policy Document

You have provided two suggestions regarding the policy document you call a "Pollutant Guidance Document". They relate to the time of adoption and the content of the document, which we call a state policy for water quality control or a pollutant policy document.

The proposal to prepare and consider a state policy for control of pollutants in the Bay-Delta Estuary is a response to widespread interest in the improvement and coordination of the water pollutant objectives for the Bay-Delta Estuary in the Region 2 and Region 5 water quality control plans. The two regions are responsible for planning for the control of pollutants other than salinity in the Estuary. The State Board intends to leave that responsibility undisturbed. However, the State Board will in Phase I of its hearing receive evidence on the effects of other pollutants on beneficial uses in the Estuary. This evidence will be useful to the Board in distinguishing the effects of salinity on beneficial uses from the effects of other pollutants. The evidence will also be useful to the regional boards, which have been invited to participate in the hearing, in gathering information for their next basin plan amendments.

Since the two regions have jurisdiction over geographic areas which are in hydraulic continuity, coordination between the regions is essential. We expect that the pollutant policy for the Estuary will contain sufficient guidance to the regional boards so that their amended plans will be compatible. The State Board is authorized to adopt state policy for water quality control under California Water Code § 13140 et seq. The State Board's authority under the statute is relatively broad. Therefore, if sufficient information is available, the policy could be specific in nature. However, the specificity of the policy is a matter for the Board to decide after it has received evidence. Therefore, we cannot make a commitment regarding its specificity at this time.

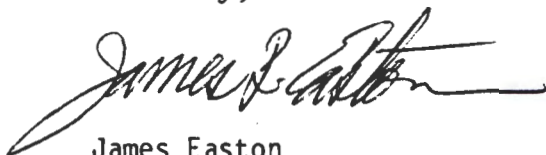
Regarding the time of adoption of the policy, we agree with you that it should be developed and adopted as early as possible, to ensure that the regional boards can commence their efforts as soon as possible. However, as explained above, we see no reason to delay the adoption of the water quality control plan for salinity. Further, taking both the policy and the plan to a hearing in the same time frame will lead to earlier implementation.

#### Regional Board Resources

You have commented regarding the provision of resources to the Regional Boards for the Bay-Delta hearing process. The State Board is well aware of the extent of the Regional Boards' needs for resources, and has accounted for those needs in its most recent Bay-Delta hearing budget change proposal.

I thank you again for your interest and comments. We look forward to working with EPA to assure that the forthcoming process is made as effective as possible. If you have any questions, please contact me or Walt Pettit.

Sincerely,

A handwritten signature in dark ink, appearing to read "James Easton", with a stylized, flowing script.

James Easton  
Executive Director



(In Reply Refer To: W-3)

December 30, 1986

Mr. James L. Easton  
 Executive Director  
 State Water Resources Control Board  
 P.O. Box 100  
 Sacramento, CA 95801

Dear Mr. Easton:

EPA would like to take this opportunity to comment upon the draft Workplan for the Hearing Process on the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

First, I would like to commend the State Board for the ambitious undertaking that it is considering. Water quality in the Delta and Bay is a very complex as well as a politically and emotionally sensitive subject. The workplan that the Board has outlined should in fact lead to improved water quality and protections for the beneficial uses of the estuary.

Second, as you are aware, the Delta Plan review is being conducted in part to satisfy the water quality standards review requirements of the Clean Water Act. As such, I would like to make it clear that EPA's interest and role in the upcoming hearings pertain only to those activities that can be considered part of the water quality planning and standards process. EPA has no interest in, and is explicitly prohibited from, becoming involved in the State's water rights allocation process. For this reason many of EPA's comments are directed to clearly identifying and segregating the water quality standards process from the water rights process. We have been working with your staff to ensure that EPA, the State Board, and the public will have no doubt where EPA does and does not have a role.

Any revisions to the water quality standards contained in the Delta Plan or either of the Central Valley or San Francisco Bay Basin Plans, will come to EPA for approval under Section 303 of the Act and parts 130 and 131 of its implementing regulations. We are interested in working closely with the

## CONCURRENCES

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State and Regional Boards throughout the review process to ensure that the resulting water quality standards will meet the criteria for approval. These requirements are detailed in EPA's Water Quality Standards regulations (40 CFR 131.5 and 131.6). These regulations clearly define the approval criteria and types of findings the State Board must make when considering different levels of protection for the Delta's beneficial uses. The State Board should ensure that these approval criteria are explicitly understood by all hearing participants and by staff that will recommend proposed standards so that there will be a basis for the subsequent findings the State will have to make to support different decisions.

I would also like to comment on the integration of water quality standards for flow, salinity, and pollutants in the pending review, and upon the nature of the Board's "Pollutant Policy Document". We acknowledge that pollution control is primarily the responsibility of the Regional Boards, and we support the State Board's decision to involve the Central Valley and the San Francisco Bay Regional Boards in the Delta hearings.

However, although the Regional Boards are responsible for developing water quality standards for pollutants within their respective basins, the State Board is ultimately responsible for all water quality standards in California and for ensuring that beneficial uses are being protected in the State's waters in their review and approval of the Regional Boards' Basin Plans. All standards revisions that are enacted as a result of the 1987-88 hearings, whether they are adopted only by the State Board or are initially adopted by either of the Regional Boards, should come to EPA as a single package for our review and subsequent consideration. This is necessary because a triennial review of a water body must review all appropriate standards necessary to maintain beneficial uses.

In regard to explicitly segregating the water quality standards and water rights processes, we believe this could easily be accomplished by a minor modification to the proposed time line for the hearings process. The present time line does not indicate when the Salinity Control Plan adopted by the State Board or pollutant standards initially adopted by the Regional Boards will be sent to EPA for our review and consideration for approval, which would conclude the water quality planning component of this Delta Plan review. It is our understanding that State Board staff have drafted a revised time line addressing this concern.



In regard to the proposed Pollutant Policy Document, it is stated on page 3 of the draft workplan that "the Board will consider controlling pollutants via flushing and dilution flows through water rights amendments only after all reasonable source control methods have been required". EPA agrees this is a realistic approach, and agrees wholeheartedly that treatment and source control are preferable to diluting flows as methods for controlling pollutants. As part of the Phase I hearings, the Board will receive evidence on what source control methods have been established for pollutants of concern within the estuary. Where the State Board determines for a given pollutant that all "reasonable" source control methods have not been implemented, the Pollutant Policy Document should contain, as appropriate, specific guidance to the Regional Boards as to what pollutants require what specific additional point or non-point source controls.

However, the workplan is written as if it is already a foregone conclusion that salinity is the only pollutant which will be considered for control through flushing and dilution flows. This may not be the case. The Phase I hearings are designed to take testimony on what pollutants may be impairing beneficial uses, what source controls are in place for these pollutants, and what future source controls may be needed. As a result of the Phase I hearings, it is possible that a pollutant will be identified which is impairing beneficial uses, and for which the SWRCB will determine that all reasonable source controls have been applied. In such a case the SWRCB should consider using flows to control both salinity and that pollutant during the upcoming water rights hearings. However, EPA recognizes that allocating flows to meet water quality standards is a determination to be made by the State.

Additionally, the Pollutant Policy Document may also have to be submitted to EPA for approval (40 CFR 130.5 and 131.13). The rationale for sending this Document to EPA for approval is to ensure that the subsequent standards developed by the Regional Boards are consistent with Federal requirements. We will be meeting with your staff to determine if or when this document must receive EPA approval.

As a final point, I would like to remind you that in Resolution 80-18, the State Board committed to additional studies and water quality standards adoptions in the Bay-Delta estuary. These commitments were conditions of EPA's 1980 approval of the 1978 Delta Plan (a copy of our approval letter is enclosed). These conditions still apply as they were not

modified by EPA as a result of either the 1981 or 1984 triennial reviews of the Delta Plan and should be resolved at this Delta Plan review. We recognize that, over the intervening years, the State Board and others have been diligently working on these issues, and that considerable data is available now that was not at the time of the adoption of the 1978 Plan. The list of topics and issues for Phases I and II, as outlined in the draft workplan, should be evaluated against these commitments and conditions to ensure that these outstanding conditions will be resolved in the upcoming hearing process.

I look forward to continuing to work closely with the State Board on this most important water quality planning process. If you have any questions, please do not hesitate to call me at 415/974-8089, or your staff may call either Catherine Kuhlman (415/974-8285) or Jeremy Johnstone (415/974-8262).

Sincerely,

David B. Jones  
Chief, California Branch  
Water Management Division

Enclosure

cc: William Crooks, CVRWQCB  
Roger James, SFBRWQCB

W-1 - Reading File  
W-3 - Reading File  
W-3 - Official File

W-3 - J. Johnstone:larry:12-17-86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

(In reply respond to: W-3)

7 OCT 1987

Mr. William Travis  
San Francisco Bay Conservation and  
Development Commission  
30 Van Ness Avenue, Suite 2011  
San Francisco, CA 94102-6080

Dear Mr. Travis:

Thank you for your letter of July 20, 1987 regarding your testimony for the State Water Resources Control Board's Bay/Delta hearings on water quality standards for Suisun Marsh.

In 1978, the State Board adopted the Delta Water Quality Control Plan (Delta Plan) and Water Right Decision 1485 (D-1485). The Delta Plan established water quality standards for the Delta, including criteria to protect Suisun Marsh and a schedule for implementing the criteria. D-1485 amended various water right permits to incorporate the criteria and implementation schedule established in the Delta Plan. However, on December 5, 1985, the State Board issued a water right order with an extended implementation schedule which superseded the schedule in D-1485. In your letter, you requested that EPA move to restore the original standards.

While the State Board did issue a water right order containing an extended implementation schedule, the Delta Plan has not been similarly amended. The criteria and original implementation schedule as established in the Delta Plan remain the federally-approved water quality standards for Suisun Marsh. Thus, there is nothing for EPA to "restore." The water right permit amendments do not affect the federally-approved water quality standards; therefore, EPA has no justification for intervening in the adoption of these water right decisions and orders.

I hope this letter clarifies EPA's understanding of the applicable water quality standards protecting Suisun Marsh. If you have any questions relating to these standards, please

CONCURRENCES							
SYMBOL	W-3	W-3	W-4	RC-4	W-		
SURNAME	Eberhardt	Kuhlmann	Blodgett	Nutt	W-		
DATE	2 Oct 87	10/2/87	10/2/87	10/5/87	10/6/87		



- 2 -

contact Catherine Kuhlman, Chief, California Section, Water  
Quality Planning and Standards Branch, Water Management  
Division at 415/974-8285.

Sincerely,

Original Signed by:

Harry Seraydarian

Harry Seraydarian  
Director

Water Management Division

cc: Jerry Johns, State Water Resources Control Board  
William T. Davoren, Bay Institute of San Francisco

W-1 - Reading File

W-3 - Reading File

W-3 - Official File

W-3 - D. Eberhardt, Larry, 09/16/87